The Journal

OF THE

Jamaica Agricultural Society.

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BOARD OF MANAGEMENT.

THE usual monthly meeting of the Board of Management of the Jamaica Agricultural Society was held at the office of the Society, No. 11 North Parade, Kingston, at 1 p.m., on Thursday, 16th June, 1910, (after the Half-yearly General Meeting), present: —His Excellency the Governor (in the chair), the Hons. Geo. McGrath, R. P. Simmonds, and J. R. Williams, Messrs. A. W. Douet, C. A. T. Fursdon, A. C. L. Martin, Conrad Watson, and the Secretary, Jno. Barclay.

Apologies for absence were received from His Grace the Archbishop, who was leaving on the steamer the same day, and from Mr. Joseph Shore.

The minutes of the previous meeting having been published in the current month's JOURNAL were taken as read and confirmed.

The *Secretary submitted the following matters arising out of* the minutes :—

(a) Appointment of *two new Instructors.* The Secretary submitted report as follows :—

I beg to report that as directed by the Board of Management, I arranged for the six selected candidates for the positions of Instructors in St. Catherine and Hanover and Westmoreland, to attend at Hope Gardens before the Selection Committee and give a demonstration in practical field work.

The candidates attended and were examined separately before Mr. Bertram. Mr. Campbell, and Mr. Williams. On the following morning, Friday, the 27th May, the Selection Committee met at the office of the Society,—present: Mr. Bertram, Mr. Campbell, Mr. Williams, and the Secretary: Mr. Williams presiding.

The Secretary read the minute of last meeting dealing with the ap pointment of the Selection Committee and its duties.

The Committee called for the applications and references of the can didates who were called upon to go through the field test of the previou evening. After consideration they agreed to appoint Mr. S. A. Schleifer Metcalfe, Brainerd P.O., for the parishes of Hanover and Westmoreland and Mr. H. L. Mossman, Carew Castle, Bog Walk, for St. Catherine.

The Secretary was instructed to send on this decision to the othe members of the Committee for approval, so that the Instructors migh arrange to take up their duties as early as they could do so.

The Instructors' Committee approved the selection, and Mr. Moss man took up his duties on the 1st of June, and Mr. Schleifer his on th 13th of the month.

I advised the various Branch Societies in St. Catherine and in Hanover and Westmoreland of the appointment of these Instructors.—JNO BARCLAY, Secretary.

The appointment of these Instructors was confirmed.

(b) Affiliation of St. Thomas Planters' Association. The Secretary reported that the St. Thomas Planters' Association had now complied with all the rules governing the affiliation of local Agricultural Societies, and affiliation was granted.

(c) Banana Disease in Central America. Letter from C.S.O. No. 5692/5516, of 9th June, 1910

With reference to your letter dated the 21st ultimo, No. 732, I am directed to state for the information of your Society, that the Governor has issued a Proclamation prohibiting the importation into this Colony from all countries of Central and South America and from the Island of Trinidad, of banana plants and other articles specified in such Proclamation.—(Sgd.) ROBT. JOHNSTONE, Asst. Colonial Secretary.

(Proclamation is published in another part of the JOURNAL).

It was thought that it would make it safer to add to the Proclamation a prohibition against the importation of all root crops as may happen to be grown among bananas, such as tannias, cassava, yams, sweet potatoes, etc. The Secretary was instructed to write the Government to this effect.

The Secretary reported that one of the matters submitted at the last meeting, namely, as to whether there should be a total prohibition against the exportation of banana suckers or an export duty, had been considered by the Staple and Minor Products Committee, who had reported that they were in favour of an export tax. As the matter was an important one it was resolved to discuss it again at the next Board meeting, and if so decided ask for legislation on the matter at the next session of the Legislative Council.

(d) Expenses of Authorised Persons. The matter of the expenses of "authorised persons" under the amended Praedial Larceny Law, had been already dealt with at the Half-yearly General Meeting, so was not further considered.

(e) Cattle landed from Cuba. The following letter from Mr. Fursdon was submitted :—

Barbican. 9th June, 1910.

Some of the information about the recent importation of horned stock, without being placed in quarantine, which you were instructed to place before the Board of Management, appeared in yesterday's papers as an answer to questions asked by the hon. member for St. Ann in the Legislative Council.

These answers disclose a very startling state of affairs. It is, apparently, quite possible to import cattle into this Island and, with the full knowledge of the Customs authorities, keep them on shore for a much longer period than fourteen days without the ship's agents or the owner of the stock communicating with the Inspector of Stock. Further, stock can be landed and re-exported (unless the owner changes his mind) without the Inspector of Stock knowing anything about it.

The Colonial Secretary's answer does not tell us if the stock were ever inspected by the Inspector of Stock; probably not, but that fourteen

days had expired. These stock enjoyed life in St. Andrew before returning to Kingston to fulfil their destiny, and one cannot but feel alarmed at the possibility of that district being infected. It is the duty of the Agricultural Society to send such a strong protest to His Excellency the Governor that shall insure that our quarantine regulations be not ignored in this way on any future occasion.

The Island suffered heavily when Texan Fever was allowed in, and we cannot afford to have any further risks. I notice that the Governor has expressed his disapproval of the course followed by the Customs Department in this matter, but will the Agricultural Society consider this sufficient to prevent a repetition? This is, I think, the second time that an illegal importation of stock has taken place, all quarantine regulations to the contrary notwithstanding!

I have not got a copy of the law, but it must be the duty of some one to notify the arrival of stock to the Inspector of Stock. On the former occasion the Government attempted to penalize the owner of the stock, if my memory serves me right, to the tune of £60 because the stock were not quarantined, "illegally imported" as it was called at the time, and it will be interesting to see what action, if any, will now be taken."—(Sgd.) C. A. T. FURSDON.

His Excellency said, that no protest that the Agricultural Society might make in this matter would increase the wish of the Government to prevent such negligence again. He was very much displeased at what had happened and he had written to the Customs Department to this effect, and called upon them to have the law followed out strictly in future. The Board accepted His Excellency's assurance in this respect and no other action was taken.

(f) Cotton. The Secretary stated that he was not yet in a position to give the returns from the cotton plots; one of the plots, however, had run to over seventy, possibly eighty, pounds for the square chain.

Mr. Watson said that if such a return could be got per acre it would be very satisfactory. Mr. Watson then made a statement regarding his experience of cotton, showing that he had made a success of it for three years running. (This is published on another page).

His Excellency said it was very satisfactory to hear the results of Mr. Watson's cultivation of cotton; Mr. Watson's had been somewhat of an experiment; he thought, however, that Mr. Watson had advised the Society not to encourage the small men to grow cotton. Mr. Watson said, that was so,—what he had said was that they should wait until the bigger men made a success of growing cotton, then the small men would be more ready to follow.

The following letters from the C.S.O. were submitted:—

(a) Letter from the Commissioner of Grand Cayman Stating that the local Agricultural Society affiliated to the parent Society, was progressing and had done considerable good, but it would be a great stimulation if they could get the services of an Agricultural Instructor for a short time.

The matter was favourably considered and it was resolved to reply that the Board would endeavour to arrange that Mr. Cradwick

be sent to Grand Cayman in the month of December if that time would suit them.

(b) Exhibition in Toronto. C.S.O. Letter No. 5879/5284, of 14th June, 1910 :

I am directed by the Governor to state for the information of the Jamaica Agricultural Society, that the Legislative Council has voted a sum of £150 for the representation of Jamaica at the Exhibition to be held at Toronto in August and September next, and to ask you to be so good as to report what arrangements the Society would propose to make to utilise the amount.—(Sgd.) P. C. CORK, Colonial Secretary.

The Board resolved to reply that while they had been able before to undertake the representation of the Colony at previous Exhibitions, as the Secretary was going on leave of absence for three months, the office would not be able to undertake the collection of exhibits for Toronto.

As a representative, the name of Mr. A. B. Ventresse was suggested, and it was also suggested that the representative who might be selected to attend the Exhibition, might undertake the collection of the exhibits.

The Secretary was instructed to reply to the Colonial Secretary to this effect.

Agricultural Show at Knutsford. The following letter from the Jamaica Jockey Club was submitted :—

I am instructed by my Board of Directors to ask you to place before the governing body of your Society the following :—

(a) That my Directors have decided to have an Agricultural Show at Knutsford Park next February.

(b) That they have voted for the prize list the sum of £300 as a maximum, less the value of any cups that may be given.

(c) That the following Committee has been appointed to make all the necessary arrangements, viz. : Messrs. Ernest Verley, A. L. Keeling, Frank Davis, Otto Crowden, A. C. L. Martin, C. A. T. Fursdon, John Barclay, and Dr. C. R. White ; Mr. Ernest Verley as Chairman.

My Directors realize that a large Show of this description is apt to be grossly mismanaged without expert advice as to the arrangements for agricultural products, the staging of such exhibits, the various conveniences necessary, the enlisting of the sympathies of the small proprietors throughout the Island and the judging of the exhibits, etc., etc. ; therefore they appeal to your Society to assist them in carrying through this Show practically and successfully.

Your Society has the organisation and the staff, and my directors solicit your good offices in allowing your Secretary, your staff and your Instructors, not only to co-operate with us in the organisation and management of the Show, but to work up the Show in the country parts of the Island and to assist on the days of the Show. Most of your Instructors are experienced men at Shows, and as they cover every parish in the Island, their help in organising will be very necessary, while the experience of your Secretary and staff will be invaluable for the proper carrying out of the undertaking above alluded to. I have, therefore, earnestly to ask that your Society will be good enough to assist us in our undertaking by giving us the help of your Secretary, staff, Instructors, etc., etc., as outlined above, for which my Directors will be the debtors to

It was resolved to assist with the proposed Show as requested. The Secretary was authorised to act on the Committee and help as far as the Society's organisation could.

Resolutions from Central St. Mary Branch were submitted as follows :-

(a) Woodpeckers. "Resolved—that in view of the very great loss suffered through the destruction of cocoa pods by woodpeckers, the General Secretary be requested to bring before the Board of Management, the necessity of asking the Government to take woodpeckers off the list of protected birds."

The Secretary stated that he had asked in the JOURNAL for opinions on the subject and the matter could be left over till they had fuller information.

(b) Bananas. "Resolved—that this Society after discussing the subject of buying bananas on the present system—by the stem—asks that the parent Society consider the matter and see the advisability of approaching the trading companies in Jamaica with the view of getting them to buy bananas by weight."

The Secretary said he understood that as regards this matter other representations would be put forward from other Branch Societies, so the matter could wait till it had been more fully discussed throughout the Island. Mr. Simmonds said, that he thought it would be much better to let this matter alone and sell the fruit as it goes at present, by the stem. He was the President of the Agricultural Society at Albany, but was not present at the meeting when this matter was discussed. He had, however, been given to understand that a motion was to be brought forward to call attention to the thin fruit that was being sold. A quantity of fruit had been bought in the district through the representation of. runners, and after it had been sent to Port Antonio was returned as being of no use. Furthermore, with reference to the increasing of the license, it was felt that the license should be made high so as to prevent runners going about the country urging people to cut their fruit before it was fit. It was agreed that the matter should be left over until representations on the subject came from Branch Societies or others.

Woolless Sheep. The Secretary said he had made further inqniry as to when a troop ship would be leaving West Africa for Jamaica, so that they might import some woolless sheep, and had learnt from the Military Headquarters that a troop ship might be leaving Sierra Leone for Jamaica about November, 1911.

Praedial Larceny. A letter was submitted from Mr. Jas. Daly Lewis, Brumalia, Mandeville, nominating Jas. Evans, Bloomfield, Mandeville, and Chas. Tucker, New Green, Mandeville, both of whom were rangers on Brumalia, to be appointed "authorised persons" under the amended Praedial Larceny Law. The Secretary was instructed to send on the names to the Inspector General.

Grants to Shows. The following applications for grants to Shows were made :—(a) Hector's River, 25th August; (b) Santa Cruz, 9th November; (c) Hanover, at Lucea, 1st December.

The usual grants were made on condition that they complied with the rules.

(d) Letter from the Secretary of the St. Mary Agricultural Show was read with regard to the grant for that Show, which was not entertained at the last meeting. It was pointed out that they did not understand the conditions and asked that under the circumstances the Board re-consider the matter. On the motion of Mr. Simmonds, seconded by Mr. Muirhead, it was resolved to give the Show the usual grant provided the other rules governing Shows were fulfilled.

In reply to questions, the Secretary stated that all the regulations governing Shows were not printed; they had been passed from time to time, and it was desirable that out of their experience, further rules should now be formulated and printed. He was instructed to do this.

Applications for Affiliation. The following applications for affiliation of local Societies were submitted :—(a) Southfield (St. Elizabeth); (b) Nain (St. Elizabeth).

Both Societies having complied with the rules were affiliated.

New Members. The following new members were elected :—A. M. Archer, Port-au-Prince, Haiti; Geo. de Pupinasse, Port-au-Prince.

The meeting adjourned till Thursday, the 21st July, 1910, at 11.40 a.m.

WHY OUR CIGAR EXPORTS ARE SMALL.

As in every other industry, prices for tobacco go up and down. For some years back it hardly paid growers to grow, and these last two years owing to good crops, there was more cigar tobacco than the trade could use and the price offered was very low.

Now owing to the heavy rains of last November washing out the tobacco nurseries, leaf tobacco is very scarce, but with excellent tobacco seasons since, what was saved has grown magnificently and is of good quality. There is great competition to get the leaf, and growers are getting exactly three times the price of last year where they are not under contract.

The tobacco trade of Jamaica ought to be larger than it is; we refer to the export trade. But we suffer from certain disabilities. We cannot compete with cigars made in England and in the East, because we pay more for making our cigars, more for taxes, more for the Sumatra wrappers, then we pay more duty license than what is paid on the cigars made in England. Cigar makers in Jamaica are well paid. They receive for instance for Conchas Especiales, 3/6 per 100; in England the price is 3/ per 100 to the cigar maker. Again,

the cigar makers here take as a perquisite five cigars per day of any kind they are making, in addition in most cases to what they smoke at work, where they are smokers; in England the allowance is two per day.

Cigar making here, therefore, is a good trade for the worker, and as it is a skilled trade workmen are well paid. In England they import raw leaf at 3/8 per pound duty and make the cigars there, while as we send manufactured cigars, we pay 6/8 per pound duty—there is always about 3/ difference between the two. The reasons why we cannot compete with the cigars from the East like Manillas and Indians, is because the cost of making is very much less there; the boxes do not cost so much, as they are not so good, and they use larger boxes; while the wrappers also cost less.

Intrinsically,—experts have told us—our tobacco, the best grown, say from Morgan's Valley, and Temple Hall, cannot be excelled for making the finest cigars.

Note—Since this was written the Legislative Council have granted a rebate of the duty paid on Sumatra wrappers for cigars exported from the Island.

ST. ELIZABETH AND LEAF TOBACCO.

SOUTHERN St. Elizabeth is a very suitable district for growing tobacco, and nearly every settler has a patch. Quantities of leaf and twist are taken to other parts of the Island and sell well. Tobacco stands dry weather well, in fact, moist climates do not grow a good smoking tobacco profitably, but a moist climate is needed *for a special kind of tobacco—tobacco to be used for a special purpose,—i.e.*, Sumatra leaf for wrappers.

Every district in Jamaica can grow some crop, not perhaps peculiar to itself, but peculiarly better than other districts. Southern St. Elizabeth can grow cassava, grapes and tobacco, better than any other district and grow all these crops conveniently, but—they want developing. We have before dealt with cassava and its chief products—starch and farine. Now we should like to encourage the cultivators in St. Elizabeth to grow more and better tobacco, not a cigar tobacco but a pipe tobacco. A good deal of experimenting was done some years ago in sending abroad samples of our common leaf for test as pipe tobacco, with the result that it was found to be acceptable.

To make the tobacco industry a strong and important one we require an export trade. As before stated it is difficult for us to compete with cigars unless we can produce them a good deal cheaper, but we could do, and ought to do, a trade, even if a small one, in exporting leaf, if we had it in quantity.

We think St. Elizabeth could do a great deal more in growing leaf tobacco, and this coming August and September, every one interested should plant a nursery carefully, using their own seed, not

Havana tobacco seed, to a bit larger extent than before, and if there is a surplus over home wants next year, we think we can arrange to get a buyer of the leaf at a fair price for experimenting in shipments to the United Kingdom. We cannot, of course, definitely promise this, as so much depends upon the leaf grown, and so we do not say at once, plant largely, but we say, plant a little more than you have done in the past and let us have leaf enough to try what may be done.

ORANGES.

The Southern California Fruit Exchange is composed only of growers who recognise all legitimate dealers in the trade, and who are organised for the purpose of disposing of their products in all markets of the country upon the most advantageous terms, and to secure distribution to the trade at the least expense compatible with the best service, securing to the consumer the fruit at reasonable prices, and to the grower the best average returns.

When the Southern California Fruit Exchange resumes its selling operations on September 1st next, in the absence of other instructions from, or a change of policy being inaugurated by the growers themselves through their representatives on its Board of Directors, the Management will endeavour to sell the fruit in such a manner as will bring the *most money for the product*, confining itself neither to cash sales in California, f.o.b. sales California (subject to inspection, draft attached to bill of lading), or sales delivered, nor to any other one method. Its agents and representatives will be instructed to secure all orders possible from fruit, allowing the customer to take his preference as to whether he wants these orders to be for spot cash, f.o.b., usual terms, or delivered, subject of course to the confirmation of the Exchange or Association shipping.

Growers or Associations of growers, not connected with the Southern California Fruit Exchange, have the opportunity now to associate or to form new associations according to their preference, or add to conditions existing in their localities.

Believing that in co-operation with each other, the best net results to the growers can be obtained, we appeal to all present Exchange members and others interested in maintaining values of orchard property, to put forth every effort to secure as large a membership as possible in our associations and exchanges.

The freight from California to New York is 4s. 6d. per 100lb. box, a distance of 3,000 miles.

Oranges are shipped east to New York and London and throughout Canada, and arrive in condition.

Fruit Cup.—Mix together the juice of half a lemon, one tablespoonful each of lime juice and pineapple, four ounces of sugar and two ounces of shaved ice. Fill up with milk, shake until foamy, and drink at once.

THE BANANA DISEASE AND OTHER ENEMIES OF THE PLANT IN COSTA RICA.

By H. Q. Levy, Agricultural Instructor.

From time to time articles have appeared in the Journal dealing with the Banana disease in Costa Rica and other Central American Republics, all of these containing a certain amount of truth, but none giving sufficient facts to enable the Jamaica planter to grasp the real state of affairs.

I therefore think the time has arrived when those interested should know something definite about this disease that attacks the Banana plant, to explain the conditions that prevail in such a way, that there will be no room for doubt. That such a disease *does* exist (despite the statements to the contrary) and to point out what a calamity to the fruit industry the introduction of this disease would be. That it may be introduced without the actual importation of infected soil, suckers or bunches of the fruit, is a subject that ought to be enquired into, for as a precaution against spreading the disease from one farm to another part of the same farm, it has been the practice in parts of Costa Rica, on the advice of Dr. McKinney, the expert Bacteriologist of the United Fruit Co., to make the labourers pass their cutlasses or other farm tools through the flame, so as to destroy any germs of the disease. Well there are scores of labourers returning to Jamaica each year from Bocas and Costa Rica who bring along with them cutlasses, etc., which have been in contact with diseased plants, no precaution having been taken to disinfect such tools. The disease may or may not be introduced in this way, but precautions should be taken until it is proved beyond a doubt, that only a lengthened exposure to light and air is sufficient to guard against infection.

I was in Costa Rica for about a year, and while there was employed on a farm, that may be said to be in the centre of the diseased area, I might go further and say the particular farm suffered more from disease than any other farm in Costa Rica. Of course, there are some parts of the country that are at present quite free from disease, but it is my opinion that it is only a matter of time when it will spread over the entire Banana belt, a peculiar thing about it is that it does not attack any other crop, as evinced, by growing healthy crops of cassava, corn, peas, canes, cocoa, rubber, etc., on a piece of land that is badly attacked with Banana disease, etc.

I conducted a number of experiments for its owners and for my own information, hoping in the long run to find out some way of coping with its ravages.

My observations led me to the following conclusions :—

1. The Banana fields of Costa Rica are suffering from quite a number of adverse conditions, and may be classed under the fol-

(a) Exhausted Fields.—These fields consist for the most part of lands that were first settled and have been continually cropped for a number of years without any rest or attempt to renew their fertility or stir up the soil and rejuvenate it.

(b) Lack of Proper Drainage.—Up to the time I left, it was the custom to put down shallow drains through watery farms, but in most cases sufficient depth, necessary fall and outlets, and keeping the drains clean after construction, were matters of only secondary importance, so long as the drains *were* there, and were perfectly straight nothing else mattered. Under this system the last stage in most cases was worst than the first, and as I know farms where the water was only 18 inches to ten feet below the surface, you can well imagine the state of affairs.

(c) Roasted Suckers.—On some farms you will find fairly large areas of land, which at one time were the bed of the very numerous rivers that flow through the country, but as the land in the Banana belt is so flat, each time of flood (say every four years) sees these rivers taking new courses, leaving behind them belts of land composed for the most part of pebbles of all sizes, intermixed with boulders and sand, all these may be covered with a few inchesof rich sandy soil.

Bananas planted on such land do well for a couple of years, but as soon as the available humus is consumed by the plant, and a spell of dry and hot weather comes along, the roots and bulbs of the suckers get practically roasted. On such places it is a terrible experience to have to move around during the heat of the day.

Is it any wonder *Bananas* after a time refuse to thrive on such uncongenial soil?

(d) Grubs.—I have often found the "yam" of a sucker riddled with holes caused by a certain grub, the passages even extending up the heart to the base of the bunch, and this so eaten away that the bunch falls to the ground. I have also found the grub itself, it looks like an ordinary "Machca" worm with a hard and very highly polished black head, up to the present I have not heard of its identification.

(e) Taltusas or Gophirs.—These are animals of the mole tribe, and they have done enormous damage throughout the entire country, eating alike the roots or bulbs of almost all plants. The oilnut plant they leave severely alone, giving the roots of it a wide berth, it is largely planted in the interior as a safeguard, the farmers also wage continual war on the animals, so much per head being paid for all animals destroyed. In that section and on the Pacific Coast, their attention is turned chiefly to destroying the cocoa, coffee and orange trees.

In the lowlands, the Banana, cassava, and sweet potato, are attacked by them.

all over the field, with part or all of the bulb or yam eaten off, it will be found not only a difficult but dangerous performance to ride quickly over such land, as from the numerous tunnels made in all directions just below the surface or as deep as two feet below, the horse's hoofs will be for ever sinking down, sometimes so suddenly that the rider is thrown.

The sucker if not too badly eaten so as to fall over, will take on a yellowish tinge, this will be gradual, which is very unlike the attack of the real Banana disease, which is sudden and in all cases fatal.

(f) Bush.—In Costa Rica Banana cultivations, it has not been the custom hitherto to keep the fields clean, *i. e.*, free of grass and weeds as is done in Jamaica, it has been said to be too expensive.

A well cleaned Costa Rican Banana field presents a funny appearance to the newly arrived Jamaican, with its grass anywhere from 6 to 18 inches high, and stumps sticking up all over the place. A badly cleaned one or one that is suffering from a lack of cleaning, can only be likened to a thick bit of Jamaica ruinate plentifully bestrewn with prickly brambles and large tree trunks lying cris-cross all over the place. Scarcely a place you would expect to find healthy Bananas, yet, so wonderful is the fertility of the soil in places that it takes years of this sort of treatment to put a Banana field entirely out of business.

(g) Last but by no means least, I put the much dreaded *Banana disease.* That there is such a disease, distinct from all other maladies such as may be caused by attack of animals (including man) or insects, or adverse soil conditions, admits of no question. I know it has been denied in certain quarters, but that was politic, and must not be taken seriously.

I know there is such a disease, as I was engaged in fighting it for nearly a year, and a more disheartening and unprofitable fight it is hard to imagine. There was no stint of money on the part of the owners, for they realized the gravity of the situation, we tried all manner of experiments and watched those of others, and yet at the end of a year we were no nearer a remedy.

In the vicinity of Bocas del Toro thousands of acres of Bananas have been wiped out. I have been told millions of dollars lost as represented by abandoned cultivations, townships, railway and farm buildings, Railway, shipping stages, etc. The situation became so serious that the United Fruit Co. has employed for the last five years an expert Bacteriologist, Dr. McKinney (whose name I have mentioned before) paying him a large salary to go all about making enquiries and conducting experiments. I was told by Mr. Minor C. Keith while in Costa Rica, that Dr. McKinney had given it as his opinion that the disease was caused by Bacteria in the soil, he had been successful in isolating it, but to that time had discovered no practical remedy or control for its ravages. The Bacteria was also located in parts of the diseased plant and roots, and in this way may

inoculated through the medium of the tools used by the labourers: they were, therefore, required to pass their cutlasses and other tools through a flame, after working in diseased sections. *It was found* almost impossible to get the labourers to adhere strictly to this rule.

To show the seriousness of the disease, I may state that on the farm I managed there were grown 1,200 acres of Bananas. In eleven months from the ravages of disease, principally, I had to put in 155,000 supplies, the cost of this and subsequent cleaning and forking amounting to not less than £2,500 which means that out of the 1,200 acres fully 850 had been replanted, but that expenditure would have been nothing, if after putting in all these supplies we could have had a healthy farm, but such was not the case as the supplies kept on dying out as fast as we could put them in, and when I left 100,000 more plants could have been put in, and yet not filled up all the gaps.

The disease attacks the plant during all stages of its growth, from suckers just placed in the ground to those with round full fruit hanging from them and just ready to cut. The attack is in all cases sudden, and the course of its disease rapid. This week you may have a perfectly healthy field and in 10 days time all you have got to represent it, is a forest of withered, dry and half rotted Banana suckers.

The disease is so rapid in its course, I do not think a remedy will ever be found to enable a sucker to recover after once showing signs of "sickness."

The younger plants, say up to 4 months old, when first attacked present no very unusual appearance for a few days, after that, it will be noticed that the stem is split starting from the bulb upward, for a distance of 1 to 2 feet, exposing the lower layer of the sucker, in some instances the split extends all the way into the heart, the heart-leaves will then grow through the split and form for a time a new sucker, but this in time will also succumb, and at last the whole plant will rot to the ground. With the older plants the first sign of infection is manifested in a different way, a fringe of yellow will appear on the lower leaves of the plant, and this border of yellow is so distinct that it can be noticed from quite a distance in contrast to the green of the other part of the leaf, it is only after a few days of this state that the entire lot of leaves turn yellow, at this stage it is often confounded with suckers suffering from drought or lack of drainage, *but in a few days the disease puts on another symptom which is* peculiar to it. All the leaves suddenly turn a brown colour and hang quite limply down the side of the sucker, the heart, leaf and bunch if *young* turning black.

The leaves do not have that crisp feel as do those that are found on dry weather banana or from the natural shedding of the leaves, but a soft and damp feel, which continues *until all* the moisture dries out, it is only a matter of time when the whole tree rots to the ground giving off a very offensive smell.

At all stages of growth, if the head or "yam" of an infected sucker be split open, the heart will be found quite rotten and composed of a putrid yellow mass, further out the fibres will be found to be firmer, but still in a decomposing state and having a yellowish tinge until the outer part is reached, and here will be found say about 1 inch from the outer surface, a bright red streak flanked to the outside and inside by a brighter yellow than occurs on the other part of the cut surface, the red streak follows all the passages to the roots and continue all along these to their extremities. All the roots will present a sickly appearance, some quite dead, others partly so, but none quite healthy.

The smell given off by a diseased banana sucker is offensive and peculiar, and if once experienced cannot afterwards be mistaken. It would be quite correct to use the Scotch term "feel the smell" in connection with it.

In a "sick" bunch the tips of the fingers present a pinched-in appearance, something like our dry weather fruit, when it starts to ripen in the open. It will not do so evenly as a healthy bunch would, but one finger here and there all over the bunch, and the yellow fingers showing up in bright contrast to the perfectly green ones. The diseased bunch if placed in a confined space, say among other fruit, in a railway car, will ripen in 24 hours; if even not quite full, if the stalk be lifted it will shed every ripe finger. Strange to say the fruit from a sick tree, when ripe, is very much sweeter than from a healthy one.

The Banana receivers, after a time become very expert in detecting a "sick" bunch, and promptly reject all that crop up when lifting fruit from the farm. Of course some farms are entirely free of disease but woe betide the one that gets the name of being diseased. The receiver if he has a "liver" on, or has been getting a rating for picking up "sick" fruit, will "give you beans," all fruits will appear in the last stages of disease to him.

Another peculiarity of the Banana disease is, that it will attack say 2 or 3 suckers out of 10 in a root, kill them entirely and allow the others to matnre fruit; the whole root of course will eventually be killed out, but at this stage if the dead trees be cut out the only way of telling for some little time that the root has been attacked, is by noticing the "pinched-in" appearance of the fingers on the bunches if there are any in the stool.

The disease is not caused as some assert, by the long and dense growth of bananas continuously on the same land, as I have procured healthy suckers and planted them on newly felled forest land with the result that the entire piece was wiped out before they were 8 months old. Neither is the disease caused by lack of drainage, for it is to be seen on the banks of the Chirippo River, adjacent to the edge, which shews a clear perpendicular cut in places of 10 feet of finest alluvial soil. The disease puts in an appearance on all kinds of soils, from any dry and well drained to extremely wet, all that may be said of it is, that it is *not* so virulent in its attacks on wet

locations as on dry. Quite the opposite of what one would expect. So far, it has not spread over the whole of the Costa Rican Banana belt, but is confined to what is called the Baltimore division. I am speaking of two years ago. Dr. McKinney gave it as his opinion that at the rate of progress it was making, in 10 years time there would not be a healthy banana tree remaining in Costa Rica. I do not know if he has modified his opinion since.

Down the line *i.e.*, nearer Limon, up to the time I left I saw no disease, what they are suffering from in those sections is, I think, lack of drainage.

I will now state some of the remedies tried by myself and others, during a series of experiments. None of them were wholly successful or promised any eventual specific for the disease. The sulphate of copper treatment was perhaps the most promising, and may have given good results (as an experiment) but I had to leave before the completion of it on account of ill-health, and on the eve of my departure the entire plot was washed away by floods, even if this had not been successful the cost of applying, and the extensive area to be treated, would preclude the carrying out of this treatment.

1. Cutting down all diseased plants level with the ground, thus exposing the entire root to the action of the sun.

2. Stumping out the entire stool, allowing the hole to remain open for some time before replanting.

3. Same as 2 but cutting up into small bits, all the heads, stems and leaves, collecting in a heap, throwing on crude petroleum and burning.

4. Same as 2 but subsequently liming the spot before replanting.

5. Same as 2 but watering the hole and surroundings, also dipping the new bits to be planted, in a weak solution of sulphate of copper (I have now forgotten the formulas.)

6. Burning the entire section and replanting away from the old stools.

7. Importation of suckers from non-infected banana countries, viz., Jamaica.

8. Procuring suckers from non-infected farms.

9. Isolating diseased sections by digging trenches 2 feet wide by 2 feet 6 inches deep completely around them, filling the trench with dry trash and burning.

10. Spading, *i.e.*, turning over with a spade about 14 inches, the top soil.

11. Forking.

12. Clean weeding.

13. *Trenching.*

These, I think, will be considered a pretty wide range of trials, besides a lot of manurial plots that were laid out in the tent division, but the results of which I had no information but they could not

have turned out well as they were abandoned some time before my departure.

My object in writing this article is to put the Jamaica planter on his guard, to let him be convinced that there *is* such a malady as the Banana Disease, what destruction it can cause, how hard it is to fight it, which has proved so far to be useless, and to suggest to him that it is still an open question in how many ways the disease may be introduced into new territory.

I think it is, therefore, our bounden duty to protect ourselves from its introduction into this Island, for, undoubtedly, that would mean at no very distant date after the extinction of the entire fruit industry.

Brown's Town.

NOTE.—[1. The above is the fullest report we have had on the subject and the matter is felt to be so serious that the Board of Management recommended the application of Law 25 of 1891, *viz.*, the prohibition by Proclamation of the Governor, of the importation of banana suckers and any implements of labour used in cultivation, from Trinidad, South and Central America into Jamaica].

[2. But this disease must have had a beginning and there must have had favouring conditions for its inception and for its continuance, when it occurs in one place and not in another.]

[3. Yet lime does not appear to have been tried].—ED.

BANANA DISEASE IN CENTRAL AMERICA.

The following proclamation by His Excellency, the Governor, *re* Importation of Banana Suckers, etc., was published in *The Jamaica Gazette* of Thursday, June 9th, 1910:—

It is hereby notified for general information, that the Jamaica Agricultural Society having called the Governor's attention to the need for protecting banana plants in this colony against the importation of disease, His Excellency, on the recommendation of the Director of Agriculture and of the Privy Council, has deemed it advisable to issue the Proclamation set out below, prohibiting the importation into this colony from all countries of Central and South America, and from the island of Trinidad, of banana plants and other articles specified in such Proclamation.

8th June, 1910.

PROCLAMATION.

By virtue of the power in me vested in that behalf by the first Section of Law 4 of 1884 "The Seeds and Plants Importation Law 1884" and by the first and second sections of Law 25 of 1891 "A Law in aid of the Seeds and Plants Importation Law 1884": I do hereby prohibit until further Proclamation the importation into this Island of any banana plants, suckers, cuttings, or any part thereof or any earth or soil or any goods, packages articles, coverings or

things in which the said banana plants, suckers, cuttings, or parts thereof may be or may have been packed or otherwise contained, or any tools or implements of labour employed in the cultivation of bananas that may have come either directly or indirectly from any of the countries hereinafter named, viz. :—

All countries of Central and South America and the Island of Trinidad.

And I do hereby order that this Proclamation shall come into force on the day of its publication in the *Jamaica Gazette* on the 9th June, 1910.

Given under my hand and the Broad Seal of this Island, at Headquarters House, Kingston, this eighth day of June, in the first year of the Reign of His Majesty King George Annoque Domini, 1910.—By command, P. C. CORK, Colonial Secretary.

VEGETABLES.

TOMATOES.—Tomatoes will grow in any type of good soil here, the chief essential being good drainage. Coarse, fresh stable manure is not the thing to apply either in the soil or on it: manure should be fine, and if there is none available, watering with liquid manure can be resorted to with the best effect. To make liquid manure put an inch or two deep of poultry, goat or sheep manure, or the same depth of human urine in an ordinary barrel, fill up half with soft water, and stir from bottom when drawing on it.

* * *

CUCUMBERS (*Cucumis sativus*).—The cucumber is prized everywhere, some persons indeed, do not care for it, as they are unable to digest it. This is generally owing to the reason that old and tough ones are used instead of fresh, young, and tender fruits. Cucumbers to be thoroughly appreciated, must be picked early in the morning, and eaten during the same day they are picked. They should never be left until the seed commences to harden, as it is then they are more difficult to digest. If allowed to reach the stage when the seed is well shaped and hard, the best plan is to boil them, the same as a marrow, when they make a most delicious vegetable.

Cucumbers can be grown in any good garden soil that has been well and deeply worked, with a liberal dressing of good rotten stable or cow manure, planted four to five feet apart, three seeds to a hill, and can either run on the ground or be trained over a fence. The latter way secures cleaner and earlier fruit.

PINEAPPLE LEMONADE.—Pineapple lemonade is a delicious and cooling beverage. The pineapple should be well ripened. Carefully remove the skin and eyes, and grate or cut in thin slices. Sprinkle half a pound of sugar over it, and squeeze over that the juice of four large lemons. Let it stand an hour. Mash through

EPIZOOTIC LYMPHANGITIS.

UNTIL quite recently very little has been written about this disease, and up to now a clear, concise account is to be found in very few of our text books, although this disease has been recognised in England among army horses returning from South Africa in 1902, in Ireland in 1903, and in London and other centres amongst private animals in 1904. The earliest report on the subject was made by Col. R. Moore, in the *Veterinary Record* in 1896, but at this date was confused with Ulcerative Lymphangitis.

Epizootic Lymphangitis is a virulent inoculable disease, characterised by suppuration of the superficial and subcutaneous lymphatic vessels, due to the presence of a specific organism. The disease is observed almost exclusively in solipeds (horses, mules and donkeys), but it is reported as having been seen affecting cattle in Japan.

The disease has from time immemorial been almost constantly confounded with glanders, farcy and ulcerative lymphangitis, in whatever part of the world it has appeared, and even with the aid of mallein and modern science, veterinary surgeons of nearly every nationality still continue to make the same mistakes. Since about 1820 French veterinarians have recognised the disease under the name of river farcy, a particular kind of farcy characterised by sores or ulcers on the skin, but every attempt to classify the disease always resulted in its being recognised as glanders or farcy of the skin. The question was again raised by French veterinary officers in 1870, who described it as a disease of the lymphatics, but as glanders and farcy co-existed with the disease, they finally concluded that it was identical, and in this respect history has repeated itself over and over again ; in India in 1899, and during the South African campaign where it was confounded with glanders, and large numbers of animals were shot as such. In 1881 Chenier wrote an article explaining definitely the difference between (glanders) farcy and (lymphangitis) farcy, pointing out that the latter disease only affects the lymphatic vessels and is not the same nature as glanders ; and that experimental inoculation of material from animals affected with the disease never produced true glanders. Finally in 1833, Riolta and Micelldne proved that there existed a form of farcy in no way connected with glanders farcy, owing to the constant presence in the pus taken from the cords or nodules of a cryptococcus. In Japan the disease was at one time only known to exist in the north-east, but later on it spread to the south-east, and subsequently it spread to nearly all the provinces of Japan ; from 1887-95 they had a total number of 16,497, averaging over 1,000 cases per annum. In India, as already stated, cases were recognised in 1894 and reported in 1896 by Moore under the title of ulcerative lymphangitis. It next appears to have been imported into South Africa during the war, and there is not any record of its having been noticed previous to the war ; but, seeing how persistently it has been confounded with glanders, it is more than likely that it was there all the time unrecognised : at all events there was every opportunity for its introduction into the country by remounts from all over the world, viz., Southern Europe, America, India, Australia, etc.

Incubative period.—My experience is that this may be put down as anything varying from three weeks to six, eight or ten months and even more ; in fact Pallin records a case which had an incubative period of over

thirteen months. I have also a few cases on record in which the disease recurred after being apparently cured, but in none of these did the second incubative period exceed six weeks; still there is not the least difference why the incubative period for recurrent cases should differ very much from those of the ordinary type. Crawford, writing from India, records a case which recurred after fourteen months (*Veterinary Journal*, June 4, 1904).

In experimental cases the first symptoms of the disease appeared after thirty-two days (viz., a nodule) with pustules bursting on the fifty-third; inoculation being subcutaneous. Mettam in Ireland, experimenting on the disease in 1904, reports that he did not get the nodular symptoms until after forty days; that pustules formed and burst five days afterwards, and that the lesions had all healed again and disappeared in fourteen days after the pustules burst, but that three months after the nodules were again putting in an appearance. The mode of inoculation in this case was scarification made in two separate places, one on the near side of the neck which took, and another on the off quarter, which did not give any reaction.

As will be observed from the remarks already made, the lesions of Epizootic Lymphangitis can be found upon any portion of the body, but it appears to be most frequently associated with those portions which are most liable to abrasions from kicks contusions, collar and harness galls: in fact inoculation appears to invariably take place whenever there is a solution of the continuity of the skin, or even a slight abrasion. The disease usually shows itself at the seat of a wound not quite healed, or it may develop from a pre-existing wound; in the latter case, the only thing that is noticed at first is that a small pustule has broken out on the edge of an old scar, or adjacent to it; and cording and knotting of the adjacent lymphatic vessels may also usually be felt so clearly that even from the beginning they may be frequently seen from a distance. But the time required for all these various symptoms to develop varies considerably; sometimes when a limb is the seat of the disease, the whole leg may swell up suddenly as in an ordinary lymphangitis, and no cording or knotting of the lymphatic vessels be recognised until the acute inflammation and diffuse swelling have subsided. Upon another occasion the corded lymphatics may be observed some considerable time before any pustules put in an appearance, and a long chain of nodules are to be seen extending along the course of the lymphatic vessels of the leg, or if found on the head, neck, or any other part of the body they extend to the nearest lymphatic glands.

The nodules vary in size, from a pea to a hen's egg; they are well defined, and at first hard and indurated, but as the complaint runs its course, they soften; the time required for this change is very irregular and depends considerably upon the resistance of the surrounding tissues. Along the course of the affected lymphatic vessels, pustules and abscesses are formed, which burst and discharge a thick yellow pus, stained with blood; the abscesses now continue to discharge, and the cavities become filled up with exuberant granulations, which, protruding beyond the surface of the skin (the edges of which are inclined to become inverted), form bright, red fungoid growth, which bleed easily when touched, and very much resemble farcy buds. Wounds which become infected with the disease may either heal up and then break out again, or they may gradually take on the appearance of the sores just described. The buds, ulcers, or sores, by all of which names they are known, are characterised by their bright red exuberant granulations and their fungoid appearance, as well as by their indurated base and well-defined edges; the adjoining skin, which is partially inverted, has a peculiar shiny appearance; an opening exists in the centre of the bud, from which the pus, at first creamy, afterwards yellowish, oily and curdled, is continually discharging. Careful

different from those of glanders (farcy). and that with energetic treatment they have a tendency to heal.

The disease is commonest in the limbs, and will be found in the fore-leg, generally extending up along the forearm to the antibrachial region and point of the shoulder. In the hind limbs it has a great tendency to extend along the inside, also where wounds due particularly to kicks are frequently situated, to the groin, thigh or abdomen. I have seen an animal with a large number of nodules of varying size upon one limb, some as small as a pea and others as large as a florin. Numerous cases of *contagion after castration and strangles have been seen.*

In cases where the conjunctiva is the original seat of the disease, no symptoms are observable externally for several weeks after the disease has begun to develop ; but as it spreads towards the edge of the eyelid. a slight watery or purulent discharge may be the first thing detected, on examination of the conjunctiva a pale pink, flat, fungoid granulation will be discovered under one of the eyelids or upon the membrana nictitans—varying in size according to the age of the lesions ; as the case develops the granulation spreads, and later the adjacent lymphatic vessels become affected. When the nasal lesions are slight, there is an absence of discharge from the nose, but as the disease spreads a thin fluid, mucous, muco-purulent or sanious discharge develops. to be a little later accompanied by an unpleasant odour from the breath. Except in those cases where the disease is ushered in by the ordinary symptoms of acute lymphangitis, there are seldom any systematic changes accompanying the disease, at least in its early changes, nor for some considerable time after, hence the danger of its spreading amongst a flock or herd before being observed. The temperature usually remains normal, but in some cases there may be a slight inclination to fever of an intermittent character, which seldom runs above 102 degrees. The appetite is very seldom or never impaired, with the exceptiou of very advanced cases, where the tendency is to become generalised, there is little or no loss of condition ; in fact, the disease appears to thrive best on animals in good condition in which the lymphatics are well developed and in good working order. A few cases, however, have developed rapidly, run a very acute course, in which the whole system was affected. This is not, however, the usual course observed.

Diagnosis.—The ulcer of Epizootic Lymphangitis is typical, and is charcterised by its exuberant granulations, its bright red colour, its inverted edges, and its thick creamy discharge of pus, in fact the appearances are all quite different from those of glanders, for which it has so often been mistaken, although in old cases they are less characteristic. However, if any doubt exists as to the diagnosis being correct, it is advisable to have recourse to all the available experimental means in order to arrive at an indisputable conclusion.

Examination of the pus gives a certain and immediate diagnosis. The cryptococcus is said to be easily seen without staining with as low a power as 400 to 500 diameters, but personally I always use an oil immersion lens for observing unstained specimens ; the organism is recognised by its size, shape, and highly refractory double outline.

The cryptococci are also easy to find in a scraping of the mucous membrane, but are not so numerous in that situation as in the material from a fresh pustule.

Testing with mallein should in no case give any reaction unless glanders is co-existing.

An inclination to heal will be noticed in some of the pustules and sores, especially if energetic treatment is resorted to.

In dealing with an outbreak every effort must be made to reduce the number of wounds to a minimum.

Differential Diagnosis.—(1) *Glanders* (*farcy*), as has already been inferred, is the disease with which Epizootic Lymphangitis is most likely to

be confounded, and the latter may be distinguished from glanders by the following reasons:—(i.) Healthy appearance of the animal generally. Emaciation and unthriftiness being only present in very advanced-cases in which the disease tends to become generalised. (ii.) Almost invariable absence of fever. (iii.) Unimpaired appetite. (iv.) Characteristic appearance of the ulcers, pustules or sores, which have an inclination to granulate and with treatment heal. (v.) The whitish colour and thick creamy consistency of the pus. (vi.) The benign and curable character of the disease. (vii.) Not giving any reaction to mallein. (viii.) Inconstancy of submaxillary glandular enlargement, even in those cases where the nasal mucous membranes are the seat of the disease, and the fact that even when the submaxillary glands are enlarged they are not necessarily fixed to the jaw—a symptom which is generally accepted to be invariably present in glanders. (ix.) The invariable presence of the cryptococci in the pus and tissues. (x.) Glanders and farcy not supervening after experimental inoculations into donkeys, guinea pigs and other susceptible animals.

(2) *Ulcerative lymphangitis.*—This is due to a bacillus, and care must be taken not to confound it with the epizootic form which is due to a cryptococcus.

(3) *Simple lymphangitis and its sequelæ, viz., suppurative lymphangitis,* due to acute inflammation and septic infection, is differentiated from the epizootic form by the absence of characteristic symptoms and of the cryptococcus, and the presence of various other organisms, especially staphylococci and streptococcus brevis. This disease is invariably easily amenable to treatment except joints and synovial bursa become involved; but it is advisable to examine specimens of the discharge under the microscope, if the case is at all indolent regarding recovery.

(4) *Tubercular lymphangitis.*—A correct diagnosis can only be arrived at by the presence of the tubercle bacilli, and the absence of the cryptococcus when specimens are examined microscopically, as the microscopic appearances are similar.

(5) *Botryomycosis* is a disease due to the presence of the Botryomycis equi, which gets into the tissues and bring about the formation of numerour subcutaneous fibrous tumours, often seen under the saddle and collar seats. They are easily differentiated by the absence of cording, the fibrous appearance of the nodules, and by the presence of the specific organism, which is easily stained with Loeffler's methyl blue.

(6) *The following diseases* might be confounded with Epizootic Lymphangitis:—Strangles, variola equina, stomatitis contagiosa pustulosa, actinomycosis, melanosis, urticaria and acne contagiosa. These diseases are all easily recognised by their own characteristics, together with their own particular organism, if due to such and the absence of the symptoms of the disease Epizootic Lymphangitis, and the non-appearance of the cryptococcus when examined microscopically.

Predisposing Causes.—Upon this point there is considerable difference of opinion. The Japanese state that the most cases occur in animals between the age of three and four years, and that it prevails more in low, marshy districts than in mountainous localities, more in rainy seasons than in dry, more in cold than in hot weather, but this latter can be accounted for by the fact that the Japanese animals are crowded into stables during the winter; which naturally brings about more wounds and contusions, and the channels for infection are thereby more numerous. Lingard goes as far as to say that the disease cannot exist in cold countries, and recommends it as a method of accelerating a cure. Head, writing in the *Veterinary Record*, states that he had over 100 patients at one time suffering with the disease in South Africa, and mentions that a change to a high district helps the case. My own experience both in South Africa and in England is that climates, districts, nor seasons have themselve
cally nothing to do with the spread and development of the diseas

To be Continued.

BEE NOTES—WHEN TO STOP EXTRACTING.

As several correspondents have been inquiring as to when to stop extracting, I think a little chat along these lines would be opportune just now. A good deal depends upon the season and locality. Here in Mid-Clarendon, we usually finish late in May or early in June, but this year, on account of the drought, it will probably be towards the end of June. In lower Vere there is a late extraction in July or sometimes even in August. The bee-keeper must therefore, according to his locality, use his discretion.

The principal matter is to see that plenty of stores are left. This is most important. Try a couple of colouies for yourself; extract all the honey and give them no help during the time when no honey is coming in and observe the difference between those and the others you left with plenty of stores.

You will find that if we get heavy rains in October, in all probability moths will take charge and the bees will be unable to protect their super combs or even the brood combs. Even if they survive, they will be so weak that very little honey will be got from the first extraction, that is, unless you are an experienced bee-keeper and know all the ropes about building up your colonies for the first flow. (Later on I shall write an article dealing with this question). It is very important to have your colonies strong at the beginning of the honey flow, and you can at no time give the bees greater help than during your last extraction. Leave plenty of stores,—too much is better than too little.

After extracting, I take off all queen-excluders and pack them away to be cleaned, and if bound, repaired. I then examine each hive and see that there is a queen. You will be sure to find some queenless, some may have swarmed without your knowledge (especially when running a system of out-apiaries), and the young queen been lost in mating. Here and there you will find one with a fertile worker or a drone-laying queen. In the case of a fertile worker, you will find eggs scattered about the combs—some cells with three or four or more—and although laid in worker combs, the sealed cells will have heads raised as high as those usually seen in drone combs.

With a drone-laying queen, your attention is first attracted by the uneven number of eggs laid in the cells. As you know, a fertile queen lays one egg in each cell—a drone-layer may lay any number (last week I counted as many as twenty in one cell). The drone-laying queen will perhaps have four or five combs full of eggs and brood, but when sealed the cells will all have raised heads, as in the case of a fertile worker.

When you have a little experience you can easily detect the difference between the fertile worker and the drone-laying queen, and as only drones batch from these eggs if not attended to the colonies will soon die out. Kill out the drone-laying queen and with your honey knife shave off the heads of all the brood; give a frame of sealed brood with stores, and if possible a nice ripe queen cell in

a West cell protector. With a fertile worker the case is different, for you cannot identify her among the others. If the colony has been neglected long enough to become weak, simply unite with one having a laying queen and she will attend to her. If fairly strong and you wish to save it, go to a strong colony, take two frames of brood with the queen, and all adhering bees and with a little smoke unite. I have never had a queen killed by this method. Another important matter that can *only* be dealt with at this time, is to see that all your increase has plenty of stores. Their value to you as money makers next season, depends entirely on this. If left without stores and not fed, later they will almost without exception, abscond, and if any are left they will be so weak as to be practically valueless as honey gatherers until late in the season.

To make bee-keeping pay, aim to have your colonies strong, and to have them strong you must have good queens. Let your watchword be good queens, and be satisfied with only the very best. Kill out all poor small ones. If the queen is good she will give you frames of brood like a board, right from top to bottom bar.

Don't forget to look ahead when taking your last extraction. I know the tendency is to take all you can get, leaving the bees to do the best they can right through the off season.

In fact, some so-called bee-keepers seldom even look at their apiaries after the last extraction, and when they do, oh my, what a state! Hives of moths—frames sealed to hives—frames eaten through and through, destroyed, and for want of what! a little attention and care. People of this stamp had better leave bee-keeping alone.

To be successful you must be constantly attending to your apiaries. You must do the things necessary when they need doing; the putting off policy, "I'll do it to-morrow," won't do.

I think the readers who wanted to know when to leave off extracting, will gather from this that they can extract at any time as long as they have sufficient honey. The all important point is, leave plenty of stores.

To take away a cask now, that is needed for that purpose, will mean your losing probably several hives of bees and certainly several casks of honey next season.

F. A. Bucher.

Canoe Valley, Chapelton.

CASTILLOA RUBBER SEEDS.

Articles which have appeared in previous issues of this Journal written by correspondents in Costa Rica and Panama—men familiar with the conditions in Jamaica and conversant with rubber conditions in these countries (one of them being the manager of a large rubber plantation)—have been almost convincing in their showing—that there are at least three varieties of Castilloa rubber there. One

of these is, apparently of no use commercially, and while the other two yield latex freely one is much superior to the other as a rubber yielder. It is not certain which of these two varieties we have in Jamaica—probably we have both—but at any rate we are satisfied that our Castilloa rubber trees yield rubber well. Still if we have had both varieties at one time they may have crossed and so we may have grades between. At any rate there is a good deal of mystery still about the different varieties of Castilloa rubber. From the good yields obtained from the first tapping results here and there in Jamaica from trees growing within what would certainly not be considered good estate conditions but on the poorer soils of properties where they were planted at random in odd corners not being utilized for other crops, it certainly does appear advisable to go on planting now, seeing also we have conditions that enable us to grow trees economically.

So it has been thought a prudent and wise step to get the seeds of Castilloa rubber trees direct from Costa Rica from the variety that yields best and to take steps to secure (1) seeds from such trees standing amongst those of the same variety; (2) fresh seeds, put up in powdered charcoal in hermetically sealed tins, so that we can be certain as possible of having the best seed in the best condition.

Mr. D. Campbell of Linstead who is much interested in rubber and who has a considerable number of trees on his property at Rose Hall in Linstead and who means to extend, has been authorised to proceed to Costa Rica on behalf of this Society, and personally secure the seed. Mr. Campbell is well fitted for this duty as he has been in Costa Rica already, where he has a son who is manager of a plantation where there are rubber trees giving high yields, so that any assistance that the latter can give will be afforded. The assistance and guidance of other men keenly interested in rubber there and for the success of the industry in Jamaica may be also afforded. We shall be glad to hear from those who are growing rubber and others who wish to grow Castilloa, if they require seed. If there are too many orders for the seed we receive, this will probably be allocated according to priority of application. At any rate we do not think the price will be at all prohibitive.

Mr. Campbell left for Costa Rica on Saturday 25th June, and may be expected back within two months.

RUBBER TAPPING IN PORTLAND AND ST. ANDREW.

THE few rubber trees being tapped in the Island are giving very satisfactory tapping results. Mr. Wates, the Instructor, is engaged in tapping some Castilloa trees on Mr. Carvallho's estate at Priestman's River, in Portland. Mr. Carvallho, who is in Costa Rica, is the author of several articles on rubber, which have appeared lately in the JOURNAL. Mr. Briscoe, the Agricultural Instructor, has also tapped two Castilloa trees at Castleton Gardens—

these trees are not growing under favourable conditions in any way, and have received no culture or attention whatever. From three tappings he has already got three pounds of rubber in five months. In May, Mr. Briscoe tapped a tree which is growing under as adverse conditions for Castilloa rubber as can be imagined—so far as theory goes. This tree is at Belle Vue, on the edge of the Red Hills in St. Andrew, 1,500 feet elevation, facing right over the plain, facing the sea, and exposed to the strong sea breeze. It is growing in red soil on white limestone formation, in a rather dry location, and stands out in the open. The bark is hide-bound, that is, tough and thick with exposure to the sun and breeze, and it was a difficult task getting through the thick bark. This tree at the first tapping—not a very severe one—gave one pound nine ounces of rubber, and at the second tapping three weeks later, one pound six ounces milk. Mr. Briscoe is sanguine that if he is able to tap regularly he ought to be able to get about seven pounds of rubber from this tree in the year.

We have always been rather sanguine about Castilloa rubber, knowing it from experience and observation to be a strong, sure grower in certain districts in Jamaica, with latex bleeding freely on the bark being cut.

We know of a tree that from the end of its third year through its fourth year, gave an ounce at each of five separate tappings, about two months apart; this, however, killed the tree at such a tender age, but it was only done for experiment, as the tree was standing where it could not remain. Our only doubt was to the exact amount of rubber that could be got from our trees. If there are two main varieties that yield latex freely, one giving far and away more than the other (according to Mr. Carvallho and Mr. DeValda)—and if most of the trees we have are the secondary variety, still we know that *we must have both*, as we imported seed first from British Honduras, then from Costa Rica, gathered from beneath trees that were then being tapped and yielding many pounds of rubber—one of these trees ten pounds of rubber at one tapping—and these were distributed through the Colony. The trees growing at Moore Town, Portland, for instance, must we think, be the variety yielding the largest amount of rubber.

Arrangements have now been made for a systematic and continuous tapping of the Castilloa rubber trees in St. Catherine and St. Mary, many of which are from 3 to 4 feet in circumference.

POTSDAM CAKES.—Sift into a mixing bowl two cups of flour and two teaspoonfuls of baking powder, add to this one cup of granulated sugar and one-half cup of butter softened, but not melted. Break into a cup two whole eggs, and fill it up with sweet milk. Stir this and pour into the mixture. Beat all briskly with a wooden spoon, flavour with vanilla and bake in gem pans. (Delicious cakes made by an easy and inexpensive recipe).—Germany.

COTTON.

At the meeting of the Board of Management held in June, Mr. Conrad Watson spoke to the following effect :—He would take this opportunity, he said, to contradict the statement made by the Director of Agriculture that no one had grown cotton in the Island for three consecutive years and made a profit out of it. He had done so. He had grown cotton in 1907, which was a year of drought, in 1908, which was only a little more favourable, and in 1909, which was a flood year, and he had made a profit in each year. If a succession of good seasonable years followed the uncertain weather of late years, far better results would accrue, and he thought penkeepers ought to try cotton growing as a rotation to grass in their pastures. The man who grew fifty acres of cotton in this way ought to make a success of it if he attended to the cultivation. He was quite sure that money could be made out of it by taking up fifty acres of pasture land in rotation, and after the crop was taken off returning it to grass. The grass would then grow better and be clear of ticks. He had spent £3 per acre up to date on his ninety acres of Sea Island Cotton, and he had now got cotton to the value of £666 on the water, at the rate of 1/6 per pound. This was a low value as the quotation was now 1/10. His returns per acre were not as high as they could have been in favourable years, but they compared favourably with what had been got in Barbados. The cost of producing cotton here was lower comparatively than in the other West Indian Islands, as here they did not have to manure the lands and they could use more implemental tillage. From his experience at New Yarmouth Estate on which he worked, it was not an ideal cotton growing soil, but there were other lands around his district, such as Mr. Ronaldson's and Mr. Anderson's, where cotton had been grown successfully, which were much more suitable.

POULTRY NOTES.

Turkeys.—A Few Common Ideas Not Usually Known.—It is not usually understood yet that turkeys have very different ways from fowls. First, *the gobblers are generally used far* too young. A turkey gobbler is not mature enough for service until he is in his third year, and better still fourth year, and turkey hens are not mature enough for using as breeders until they are two years old. It is difficult to keep turkey cocks separate until their third year, but the careful breeder must do so if he wishes best results. Degeneration is quick in spite of good feeding if the eggs set are from young turkeys,—often this is the cause—usually thought mysterious, of loss of young turkeys. Then, again, unlike the ordinary cock, one service of a turkey gobbler fertilises the whole setting. Thirteen turkey hens to one turkey cock is sufficient. One of the biggest errors, but a common one, is the giving of peppers to very young turkeys.

Time of Hatching.—Very few people, even those who have been handling poultry for some years know the different lengths of time eggs of different kinds of domestic birds take to hatch, and many also are under the impression that an incubator will hatch eggs more quickly than the birds. Of course the heat of the incubator is only a substitute for the heat of the domestic bird and the eggs hatch in the same time.

A fowl's eggs take 21 days, a turkey's 28 days, an "English" duck 28 days but a Muscovy 34 days: the eggs of a goose take 28 to 30 days.

* * *

Hints From Latest Experience.—The Setting Hen.—We have come to the conclusion that another cause (from those previously mentioned in the Journal) of poor hatches is that the setting hen does not cool the eggs enough. Some hens will not come off the nest every day if left to themselves, others come off for five minutes or so, then rush back. Twenty minutes is the minimum for the proper cooling of the eggs and in this climate half an hour even up to one hour, we find, rather does the eggs good, perhaps somewhat from the superior vitality of the hen, which is fed, refreshed and invigorated by an hour's exercise.

* * *

Incubator Chickens.—We should like to be able to say that eggs hatched by the natural hen process produce chickens of more abounding vitality than those hatched by an incubator. But the only lot of chickens we have hatched by means of an incubator for some years were strong and lively from the day of hatching and were the most active chickens we have had—but they were mothered by a turkey within a day after hatching. We had a suspicion, however, when we regularly used an incubator and had chickens hatched by hens at the same time, that the hen hatched chickens were better layers and made better stock birds. This has never been proved, however, that we know off.

* * *

Water.—The hottest weather of the year has come. For profit's sake, if not for the sake of the hens, see that there is plenty of fresh water set down for your fowls in shady corners out of the sun. Plenty of poor results with fowls are caused by not providing a supply of cool water.

STOCK NOTES.

Milk Yields.—Some of the records of large herds of *milking cattle are interesting to read.* Lord *Rothschild,* who keeps several breeds, recently published his records. The Jerseys which had been in his herd the whole year, averaged 583 gallons of milk per head, the Shorthorns, 650. The heaviest milking Shorthorn, which had been nine years in

the herd milking regularly, gave an average yield of 1,024 gallons. The best milking Shorthorn gave 12·296lbs. in one milking season. These animals are not pushed for records but are well cared and are fed on meadow-pastures during the summer.

* * *

THE DUAL PURPOSE COW.—It is still held by some contemporaries that there is not such an animal as a dual purpose cow—that a cow must either be "one to milk" or for beef. But that is because they have had no experience of the skill it takes to produce the real dual purpose cow. The cow of extreme dairy type and the cow of extreme beef type are easy to produce, but the herd of cows that are big and fleshy and yet can produce as much milk as a good herd of the extreme type of dairy animals, is the result of higher skill and judgment expended than on the other types. All types are profitable under certain circumstances, and the farmers in England who use the dairy Shorthorn and the dairy Red Poll, know what they are about. There are herds of milking Shorthorns and Red Polls that average over 6,000lbs. of milk with the best cows yielding over 15,000lbs., and this not on the forced feeding carried on so commonly in the United States, but fed on pastures in the summer—rich pastures of course, manured and fertilised regularly.

* * *

CHAMPION FAT STOCK.—In thirteen years the championship at the Scottish National Fat Stock Show has gone five times to an Aberdeen-Angus, once to a Shorthorn, and seven times to a cross between the two breeds. The contest for best steer has resulted in four wins to a Shorthorn, one to a Highlander, two to an Aberdeen-Angus, and six to an Aberdeen-Angus and Shorthorn cross. In heifers the results have been six wins to an Aberdeen-Angus, one to a Shorthorn, and six to an Aberdeen-Angus and Shorthorn cross, or a cross of the reverse order.

* * *

MEASLY PORK.—We have had letters—several from the same district, asking what is the reason that some pigs when killed have mottled flesh, so that it is rejected by purchasers. And a good thing too that the appearance of the pork prevents people from buying it, for the "mottles" are simply the "cysts" containing the eggs of the tape worm, the same as affects the dog and human beings, and unless the flesh was very well cooked the cysts, entering the human stomach, would hatch out tape worms,—worst of all internal parasites.

* * *

INDIAN DAIRY COWS.—India is not usually regarded as the home of milch breeds of cattle, but from Karachi considerable numbers of Sindi cows, the best of which are good milkers, find their way every year to the Dutch East Indies. In the Montgomery breed, which is closely related to the Sindi breed mentioned above,

there is the material from which to develop such a strain. The average yield of milk in the Pusa herd of thirty-nine Montgomery cows last year was over 4,000lbs. One cow gave 6,300lbs., another 5,700lbs., and several over 5,000lbs. In Mr. Keventer's herd at Simla, a Montgomery cow gave just about 7,000lbs. in her last milking period. The percentage of butter fat in the milk is high, averaging probably 4·5 to 5 per cent. Montgomery cattle are small and shapely, having well-developed bodies supported on rather short, clean legs. The head is neat, with fairly short horns, and the tail is long and thin, almost sweeping the ground. There is a wide range of colours including red, red and white, black, black and white, white, grey and various spotted colours, but the best cows are perhaps most frequently red or red and white. The cows are exceptionally docile and good-tempered. The young stock mature comparatively early, heifers at Pusa having their first calves at two-and-a-half to three years old. The male stock develop into good work cattle. The breed seems to adapt itself very readily to changes of climate, doing well in the arid tracts of its original home in the Montgomery District of the Punjab, in the moist climate of Behar and at altitudes of over seven thousand feet in the Himalayas.—*Agricultural Journal of India.*

COMMENTS.

Prize Holdings Competition.—The Parishes for this year's competition are St. Mary, St. Ann, Manchester and Hanover. Particulars of the competition are published among the advertising pages of each Journal, and Handbills calling attention to the competition have been posted through each of the parishes. The Instructors will be glad to hear of intending competitors to help them.

* * *

Export of Banana Suckers.—At the next meeting of the Board of Management, the matter as to whether there should be some restriction on the exportation of banana suckers will be discussed. The total prohibition of suckers being exported is not favoured, but there is a feeling in favour of the imposition of an export duty so that the revenue might be benefited. Correspondence on this subject from those interested in the matter will be of value.

* * *

"Sir Gerald" in St. Elizabeth.—The stallion "Sir Gerald" is stationed at Pepper Pen and those wishing to take advantage of his services should do so now. This stallion has been getting his best stock during the last few years and is full of fire and vigour. The last time he stood at Pepper he got some colts which sold at very high prices. There is a great demand for "Sir Gerald's," and at the time of writing no fewer than three men in one week have asked if we can find mares for them.

King's Bull "Sylvester."—The King's Hereford Bull "Sylvester" at present with Mr. K. L. Roxburgh at Annandale, St. Ann is now due for transfer to another district of the Island. He is in good health and vigour and we have seen the stock got by him—and they are as fine, healthy and well grown stock for their age as could be desired. Applicants will please write to the Secretary.

* * *

Irish Potatoes.—We shall be glad to import good seed potatoes for planting in October and November or whenever the seasons rains for that time are over. We would like all members and others who intend growing potatoes to let us have their orders early, for it happens every year that Members and Branch Societies write us just at the time of planting, asking if we have seed potatoes in stock—but we are not in a position to stock a large quantity of potatoes like a trader and speculate on them. It is advisable that we should get the orders well ahead and then there can be no disappointment. With every order a deposit must be paid—the sum of 14/ covers the cost of the potatoes per barrel and trainage.

* * *

Vegetable Seeds.—Those of our members who wish to catch the good market at Christmas and during the tourist season should plant these in their seed boxes about Christmas and January, even to the middle of February. Good vegetables are very scarce just when they are most needed, and then they come on in large quantities as the tourist season is closing. We suffered last year in having our heavy rains at a bad time. Of course we don't have rains every year as last year, but if anybody had planted before the rains last November all vegetable seeds would have been washed out. Yet there was nothing for instance to prevent people planting from September and October from the years 1904 to 1909. When people are very anxious to catch the good markets with early vegetables and wish to protect themselves against heavy rains, they must take a good deal of trouble and plant in seed boxes, removing those under cover every evening. We shall early in August have a preliminary stock of seeds for anybody taking advantage of this advice.

* * *

Cotton.—We have never been satisfied that the growing of cotton in Jamaica has got a fair chance. We never applied ourselves to forward the industry in the way it was done in St. Vincent and Barbados for instance. We have had three trying years for all kinds of agricultural products from the end of 1906 to the present moment, and unfortunately, most planting of two new crops has been done during that time, viz: rubber and cotton. Even in these trying years for agriculture, when several established agricultural crops suffered, a new crop like cotton, which has to win its way, has done very well in the only large cultivation where it has been tested. Mr. Conrad Watson, who has previously been an experienced

planter in Montserrat, has grown cotton at a substantial profit during these three trying years in succession. We refer readers interested to his remarks as given on another page, made at the last meeting of the Board of Management. We have seen Mr. Watson's statement of accounts and every item has been charged against the cotton fairly.

* * *

AFFILIATION FEE.—The rule governing the affiliation fee to be paid by local Societies to the Parent Society, has been amended owing to the large number of members belonging to some Societies, and particularly owing to the fact that certain Societies have sub-branches which pay no fee. In the parish of Hanover, for instance, there is only one Society; therefore from the whole parish the Parent Society only receives one affiliation fee of 5/. It is thought that the time has come when a slight increase ought to be made in the contribution of local Societies. The rule will now be that the affiliation fee is 5/- for local Societies having a membership up to fifty, and for every member beyond that a penny for each person, so that for a membership of 100 a Branch would pay 9/2. Each Branch Society will pay the usual fee of 5/- at the beginning of the year and towards the end of the year those having a membership of over fifty, will receive an account at the rate of a penny per member.

* * *

GREAT SHOW.—A great Agricultural Show is proposed to be held at Knutsford Park, near Kingston, in February, 1911, under the auspices of the Jamaica Jockey Club, in which the Agricultural Society, though not undertaking any financial responsibility, will join with the whole force of its organisation. Prizes to a considerable amount will be offered. There will be a good many silver cups as prizes, probably twelve at least. The Prize List is being arranged now, and will be issued six months ahead. There will be substantial prizes offered for the best Collective Exhibit from Branch Societies, and probably the Board of Management of the Agricultural Society will provide the prizes in this class, and such prizes will be substantial enough to tempt all Branch Societies in a position to do so to compete.

Mr. C. A. T. Fursdon has been appointed to act as Secretary of the Show ; his address will be c/o the Jamaica Agricultural Society, No. 11 North Parade.

It is desirable that this Show may be a record Show for the Island in every way ; and it will be an honour to win prizes in any competition at such a Show.

* * *

SAFEGUARDING VALUABLE SMALL STOCK.—Letters have reached us from time to time pointing out that while we were doing our utmost to introduce valuable breeds of small stock and were expending a good deal of effort in the encouragement and breeding of a good strain of milch goats especially, that if these animals, valuable beyond the common run among small stock,—stray sometimes

through the carelessness of others beyond the owner, they could be ruthlessly shot by malicious people, even those who knew that they were valuable stock. But the law treats all small stock in the same way. Ten years ago the Agricultural Society had one of their imported Poland China boars in charge of the Mannings Hill Branch Society shot, but fortunately it only had its shoulder broken, which we attended to and it had a good recovery. Now history repeats itself, and a sow, the progeny of the imported Large Black pigs at the Farm School at Hope, having strayed a little without its bounds, has been shot. For the safeguarding of small stock it is now proposed to amend the Pound Laws, so that anyone having goats or pigs held of particular value—and fowls can be included—these may be registered on payment of a small fee and a tag or label with a number could then be attached to the animal. Such animals wearing a tag may not be shot at sight, but would come under the rules governing the pounding of other stock. We are sure that this proposal will be hailed with pleasure by many who are now striving to breed really good pigs and goats.

* * *

We regret to announce the death of the red Shorthorn bull "Henbury Beau," presented to the Colony by the late Sir Alfred Jones, which has been on the Farm School at Hope Gardens since January, 1909; since then the bull has served thirty-seven cows, while twenty-one others at the Farm School are expected to drop calves to him during the coming year. We can also trace some fifty calves in the country by him and no doubt there are many more; so that the bull, even in the short period here, has done very good service. The bull died from an attack of gangrene from gores he received from two Indian bulls.

CORRESPONDENCE.

(Only letters with replies likely to be of general use are published here).

WOODPECKERS AND COCOA.

I send you by this post a cocoa pod eaten by a woodpecker. You will observe the half-round punctures made by the upper part of the bird's bill round the edge of the eaten part, which are so different from the scratches made by the small teeth of a rat. I should have been glad to say that I had seen the woodpecker eating the pod but I can't, but one of my pruners when working in my cultivation a few days ago, declared to me he saw one eating the pod I now send you. I questioned him most minutely in the matter and am quite convinced in my own mind that he was speaking the truth. He knew nothing of what had been written *re* woodpeckers eating cocoa. My reason for sending you the pod is on account of what I saw in the last issue of the AGRICULTURAL JOURNAL about woodpeckers eating cocoa.

I have for a long time suffered in my cultivation through cocoa being eaten by woodpeckers, and most certainly think they should be removed from the protected list.

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Since writing the above I went into my cocoa cultivation and saw a woodpecker fly into an Immortelle tree with a cocoa bean in its mouth.

JNO. T. BAYLIS.

Berkshire Hall, Linstead.

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BURNING GRASS LANDS.

Mr. Vaughan's letter in the correspondence column of your May number, touches a matter of great interest which cannot be disposed of by generalities—so much depends on the soil, climatic and other conditions.

The subject is as old as Jethro Tull—probably as old as the Egyptians.

It is well known that the *occasional* burning of *clay* soils is beneficial. It is not an uncommon practice in temperate climates to pare the sod off clay lands, newly taken up, heap and burn by a slow fire. The ashes, cinder and brick-like earth are then spread and ploughed under. The burnt earth assists to keep open the lands, promotes aeration, and the other results of tillage and drainage, and is said in the old books to fix or absorb ammonia from the air. Probably its action generally assists to bring about the conditions favourable to bacterial life which is so necessary to plant life. Though moisture is as essential as air to the beneficial forms of bacterial life, it is clear that the excess of moisture which undrained clays furnish, is inimical to such life by reason of its exclusion of air from the soil as well as for a variety of other reasons.

The burning of the sod, however, *destroys* the greater part of the *vegetable matter in* the soil.

This, in Europe with a temperate sun and ever-moist climate, is seldom objectionable and very often an advantage, for with the removal of any excess of humus, goes also the humic acids (formed by excesses of moisture and humus), which are inimical to those forms of plant life cultivated by man.

In the tropics, I have known of an instance of clay lands being brought into cultivation and the vegetation on the spots where the original wood had been burnt in heaps, was in striking contrast to the rest of the cultivation.

This was in a locality with a rainfall of 100 inches per annum and on heavy clay lands.

But in so far as the burning of lands involves the destruction of the humus, more or less completely according to the frequency of the firing, the practice is not and cannot be beneficial on lands other than heavy clays.

Vegetable matter is the crying need of tropical cultivated soils. It is astonishing how quickly it disappears from our soils when brought under cultivation—tropical conditions and most of our agricultural methods and operations contributing to this end; as astonishingly does the soil cry out and vegetation emphasise the cry for humus, and more humus yet, with each succeeding crop. The preservation of vegetable matter in the soil and its replacement when depleted, is one of the greatest problems we have to face in tropical agriculture. Without vegetable matter our soils cannot withstand droughts, will dry out, and most of our crops will perish.

The beneficial effects of burning on clay lands described above are only temporary, and when one bears in mind that they can be attained more permanently by tile-draining, liming and tillage, and at the same time the humus be preserved, burning should always be discouraged in the tropics.

I observe that Mr. Vaughan describes his land as "rich soil," and that on his experience of twenty years he is against burning. The vegetative conditions which usually earn the application of the term "rich

soil" to grass lands are usually found in connection with land naturally well drained, free, and open enough to admit of the circulation of air through it, and with enough humus to keep up its moisture sufficiently for vegetation to continue at its best—the very sort of soil conditions that twenty years of firing would deteriorate by extraction of the humus.

GUY S. EWEN.

BRANCH NOTES.

Trinity Ville (St. Thomas).—The May monthly meeting of this Branch was held on the 6th ultimo. There were present: Messrs. W. A. R. Carr, President; J. Briscoe, Travelling Instructor; B. Whitfield, D. Grant, H. E. Wisdom, Robt. Brown, E. S. Edwards, A. Hearne, and J. T. Edman, Secretary. After the reading and confirmation of the minutes of the previous meeting, the President reported that the auditors did not meet, and moved that Mr. Wisdom be added to the number. The motion was carried. Subscription was received. The Secretary reported that another borrower had "stumped up." It was decided to write those who had not to do so. The following letters from Mr. Barclay were read and dealt with: March 29, No. 7116, April 18, No. 148, and April 18, No. 150. A letter from the *Gleaner* Company, Limited, *re* Show work, was also dealt with. Mr. Briscoe brought up the Praedial Larceny Law question, and stated that the men nominated by this Society should, when authorised, have received special instruction from the Police Department. It was decided to write and ask the Inspector for the parish if he could be good enough as to place at the disposal of the Society either the Sergeant-major or a Sergeant, to so instruct these men. A lengthy discussion ensued over the proposed Show to be held in December next. After the matter was well threshed out, it was finally agreed to hold an open Show on Thursday, December 22nd next, and that R. A. Lightbourne, Esq., owner of Coley, be approached for the holding of the Show there. The Secretary was instructed to write and solicit subscriptions. A resolution which was presented asking the Governor to appoint Mr. W. A. R. Carr a J.P., was, according to advice, withdrawn, another J.P.'s name was made prominent in the resolution. The meeting then terminated.—J. T. EDMAN, Secretary.

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Hector's River (Portland).—The regular monthly meeting of this Branch was held at Sea Side on the 30th April. The attendance was the best we have had for a good while, the many buggies in the yard and the ladies in the meeting reminded one of some of those splendid gatherings we used to have just before our late Vice-president was called away. The Revd. Elijah Mair offered the opening prayer, after which the minutes of the March meeting were read and confirmed. After a good deal of discussion on the advisability of holding a Show this year, and seeing that the Show Committee that should have given its report at the April meeting had not had a meeting,—a resolution was moved by Mr. T. A. Gray, that the Show Committee be dissolved. This was carried. The meeting then resolved itself into a Show Committee and proceeded to lay down plans for a Show to be held at Grange Hill on the 25th August, 1910. Various matters in connection with the proposed Show were brought up and discussed, especially the ways and means of raising funds. Mr. Gray's resolution—"Resolved that each male member of this Society subscribe an amount of not less than 5/- towards the coming Show," was agreed to unanimously. The following gentlemen were appointed a Committee to have full charge of all Show matters:—Messrs. T. A. Gray, L. R. McBean, E. J. Jacobs, and H. R. Miles. Mr. S. A. Bowen suggested that so as to awaken matters, a public meeting be held at Sea Side on the 18th

April to talk up the Show. Another important matter that came before the meeting was the starting of the Jippi-jappa Hat-making Factory. Recently orders were received by the Society to supply "jips" in large quantities, but there weren't any. The Rev. E. Henderson was appointed Chairman of a Committee consisting of Mrs. Swift, Messrs, Gray, Mair, Jacobs, and Wates, to put on foot the company. Several members paid their subscriptions. Mr. W. H. Plant of Port Antonio, who was present, spoke very encouragingly to the members. He congratulated the Society on its past successful record, and gave some very helpful suggestions on raising Show-money. He was voted a member. W. Smith, Esq., of Ecclesdown, was also present and joined the Society.—E. J. JACOBS, Secretary.

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Frankfield (Clarendon).—On Thursday, the 26th May, at 5 p.m., this Branch had its regular monthly meeting. Present: Mr. J. Hirst, Agricultural Instructor, in the chair; eleven other members, and Mr. J. H. Stewart, who became a member and paid in his subscription. After the minutes of the last meeting were read and modified, Mr. G. W. Downie moved, and Mr. G. S. Cohen seconded the confirmation. The matter of the Loan Bank Scheme was deferred until next meeting, as the select Committee appointed to keenly consider the rules and regulations, was not ready with its report. The Chairman said there can be derived from the scheme much benefit if carefully managed, and asked for the best and most careful scrutiny before launching into the venture. Mr. Jas. Dyke suggested that rule books should be printed and distributed among the members. The Secretary supported the suggestion, but in view of so many members owing subscription, the fund of the Society is such that the idea cannot be carried out until the cost of getting up the books can be liquidated. It is hoped that members in arrears will note this and square up. No JOURNALS can be issued to such members. At this stage the Chairman remarked on the sad loss of our late King by death. He said the peaceful Monarch's death was universally felt as a blow for this and other reasons, that he was very dutiful. He was a keen agriculturist and kept a private estate of his own, and did much personal supervision. He was President of the Royal Agricultural Society of England. Since he was such an agriculturist, this Society feels that it is in duty bound to show some mark of its pathetic emotion to the bereaved Queen Mother, Alexandra. For this cause the Chairman prepared and moved and Mr. G. W. Downie seconded, and the meeting agreed to the following resolution, a copy of which the Secretary was directed to send to the Secretary of the parent Society, who will make the further remittance:—Resolved: "That the Frankfield Branch of the Jamaica Agricultural Society, deeply regrets the death of the late King, Edward VII., and feels that in him it has lost not only a King and a wise ruler, but one who was a father to his people, studied their welfare, and was also a patron of agriculture, the main industry of this district. It tenders its deepest sympathy to the Queen Mother Alexandra and the Royal Family in their bereavement. It pledges its loyalty to King George V., and believes that he will make a worthy successor to his beloved father." In the matter of the Praedial Larceny Law, nominees were appointed for the various needful districts, to be recommended to the Inspector General through the Jamaica Agricultural Society. The Chairman suggested the idea of holding a combined Show among the Societies of Upper Clarendon in the near future. This Show to be held in the neighbourhood of Kippit, near Chapelton. This Branch volunteers its hearty support and co-operation, and congratulates the Instructor for such a profitable thought, which, if carried out, would enhance largely the agricultural attention of these parts. It was agreed that our meetings be held on the fourth Friday in every month at twelve noon, instead of on Monday. Our next meeting will be

remember this, as circulars may unfortunately not reach them owing to careless bearers. The meeting closed with the National Anthem.—J. A. BECKFORD, Secretary.

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Birnamwood (Portland).—The usual monthly meeting of this Branch was held in the Schoolroom on Saturday, May 14th, 1910. There were twenty-three members present. The minutes of the last meeting were read and confirmed. The Chairman addressed the meeting on the last Prize Holdings Competition, explaining what probably is the cause of the apparent delay in the issuing of the results, and further intimated that Mr. Cradwick purposes attending a special meeting convened for the 26th May, when he will probably report on the result of the Competition. He also stated that owing to pressure of work he had not yet finished preparing the petition to the Parochial Authorities for the bridge over the Wakefield Fording, but hoped to have it ready for signatures on the date of the special meeting. On the motion of Mr. Reuben Paulwell, seconded by Mr. Thomas Lowe, it was unanimously agreed, to defer till the next meeting, the election of suitable men for recommendation to the police authorities to serve as authorised persons under the new Praedial Larceny Law. The Agricultural Show to be held at Buff Bay on the 1st of August next, came in for discussion, and it was finally decided that exhibits from members of this Branch be sent to the Show through the Society and not independently. The members took a keen interest in the matter and promised to have this district well represented at the Show. The next item brought up for consideration by the Chairman was that suggested some time ago by one of the Vice-presidents for the purchase of an Anglo-Nubian goat by the Society for the improvement of the breed of goats in the district. Twelve of the members promised to subscribe the amount to defray the cost as the funds of the Society cannot yet afford it. Mr. Maloney asked whether or not the proposal made some time ago to start a class for the making of jippi-jappa hats had been finally abandoned. The question was debated at length without anything definite being arrived at, when Mr. Reuben Paulwell moved the following resolution:—"That intending pupils of the jippi-jappa hat class to be formed in connection with this Society, give in their names to the Secretary before the next meeting, so that it may be ascertained before that date whether the necessary number for forming the class can be got." It was seconded by Mr. Henry Chevannes and adopted. On the motion of Mr. Thos. King Paulwell, seconded by Mr. Thomas Lowe, a vote of thanks was accorded Mr. John Barclay for the gift of Havanna tobacco seeds kindly sent by that gentleman to this Society. The meeting then adjourned to the 26th inst. —W. B. FRECKLETON, Secretary.

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Porus (Manchester).—The usual monthly meeting of this Branch was held in the Church of England Schoolroom on Monday, May 2nd. At roll call, members present were: Rev. W. B. Esson, President; A. S. Rose, Vice-president; the Agricultural Instructor, the Secretary, and eleven other members. The minutes of last meeting were read, adopted and confirmed. Business arising out of minutes: a petition *re* the St. Toolis bridge. Correspondence was next read, a letter from the Tropical Products Company, and one from the Secretary of parent Society *re* giving out JOURNALS to those members who are non-financial, but this Branch is on the safe side, as the Secretary refuses to give JOURNALS to any member who had not paid in the local subscription. The Secretary also put on the table ten booklets on the Manuring of Rubber and the Origin and Domestication of the Peanut, and ten Tropical Planter's Note Book, from the German Khali Works of Cuba, which were distributed to members. The next business was the appointment of authorised persons *re* praedial larceny. The gentlemen appointed and recommended are Messrs Alexander Thomas, Berrydale, H. R. Williams, Spring Grove, Stephen Murray,

Brown's Town, Walter Wright, Redbury, J. D. Pryce, Reeveswood, John R. Ellis, Upper Berrydale, T. A. Dawkins, Blue Mountain, D. Francis, Coffee Grove. Mr. D. Francis again spoke on the necessity of a resident doctor, as the D.M.O. who takes in this district, we do not sometimes see for three or four months, and in cases of emergency should the dispensers be called, they would be hurried after by the police and doctor like thieves. The old Porus road was brought up but deferred until next meeting to get further information. The Secretary was instructed to write the Parochial Board inquiring the position of the D.M.O. *re* his visits to Porus. There being no other business the meeting adjourned until June 6th, 1910, at five p.m.—C. ROWLAND, Secretary.

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Hanover.—This Branch met and in the absence of the President, the Rev. B. C. Lumsden was called to the chair. The meeting was a large one. The minutes of meeting held on 12th February, were read and confirmed. At this point the President, C. A. Cover, Esq., B.A., entered and took the chair. The following resolutions on the death of the King were moved by the President and unanimously carried, the members standing. I.—That the Hanover Branch of the J. A. S., records its deep sorrow at the loss which the Empire has sustained, through the death of King Edward the Peace-maker, and desires to express its heartfelt sympathy with his devoted Consort Queen Alexandra, His Majesty King George V., and other members of the Royal Family in their bereavement. II.—That copies of this resolution be sent to His Excellency the Governor of Jamaica for transmission through the proper channels to His Majesty King George V. Apologies for absence were read from Messrs. E. E. Melville, W. W. Williams and the Rev. A. W. Finlason. J. Hartley Duff, Esq., Inspector of Schools, being present was introduced to the meeting by the President. He was heartily welcomed. Mr. Duff expressed his appreciation of the welcome accorded him and his pleasure at being present. Prize lists of the Buff Bay Show were distributed and letters from Mr. W. Cradwick on the matter of co-operation of Branch Societies were read. The idea of sending exhibits from the Hanover Branch Society was heartily taken up. The Chairman of the District Committees undertook to work up the matter in the districts—all exhibits to be sent in to the Secretary not later than the middle of July. Letters from the Secretary J. A. S., dated 29th March, 4th, 11th and 16th April and 3rd May were read and their contents noted. It was noted with satisfaction that Hanover is one of the Parishes that comes under the Prize Holdings Competition for 1910-11. The Secretary was instructed to write the Secretary of the J. A. S. to say that the Hanover Agricultural Society will be glad if an Agricultural Instructor be appointed for this Parish as early as possible. The need for one in Hanover is all the more urgent from the fact that members desire to send exhibits to the Buff Bay Show on 1st August; that Hanover is one of the Parishes affected by the Prize Holdings Competition to be held this year, and that a Show is to be held in Lucea at the end of this year. Read letters from the Superintendent of Public Gardens asking for a report on the growth and present condition of the Castilloa Rubber plants procured by this Society from Hope Gardens in November and December, 1907: and whether Castilloa Rubber seemed suitable for this district. The Secretary stated that as the result of his enquiries he found that most of the plants had died on account of the drought prevailing at the time they were procured and throughout 1908, that those that survived were growing in moist, loamy soil, rich in humus and well shaded, that the largest one is about 8 inches in height, that no opinion can, in the circumstances, be given as to whether Castilloa Rubber is suitable for the district. This report was adopted. Submitted the report of the S. P. A. J. with a note from the Secretary asking to be informed of the comments and suggestions of members. The Society expressed its high appreciation of the much needed and useful work the S. P. A. J. is doing. An interesting discus-

sion took place in which the following points were emphasized in connection with the treatment of mules. (1) The habit the cartmen have of using long handles to their whips with which they strike the animals on the head. (2) Over-driving, and over-loading of mule-carts with people, particularly as they return from the Montego Bay, Sav.-la-Mar and Grange Hill markets on Saturdays. With regard to this, it was suggested that the police might be communicated with to be on the outlook for offences of this kind at Flint River, Sandy Bay and Grange Hill. (3) The use of long traces for the outriggers thus decreasing their power, and causing inconvenience to the shaft-mule. It was suggested that the Secretary J. A. S. might be asked to put an article in the Agricultural JOURNAL showing the waste of power and inconvenience caused by long traces and the cruelty of hitting mules on the head with the shaft of the whip. The Chairmen of the districts were asked to try to enlighten the people in their districts on these and similar points. Attention was called to the fact that Pitcharies are among the birds protected by Law from 1st March to 31st August, whereas they are very destructive, especially of queen bees during the period of fertilisation. It was agreed that the attention of the J. A. S. should be called to this, to consider whether Pitcharies might not be removed from the protected list. The Secretary was asked to enquire whether the J. A. S. had any animals such as an Angora Goat or a Boar that might be procured for the use of the members of the Society in improving their stock The Secretary stated that the number of members who have paid their subscription for this year were, up to the present 134. It was decided, as some of the members do not seem to send to the Post Office and thus do not get their JOURNALS, it should be arranged that they be sent to the Chairmen of the districts. It was decided that the Lucea Show should be held on the 1st December, 1910, also that a special meeting of the Society be held on 18th June to make out the Prize lists, etc. The Treasurer submitted his statement of accounts which showed a balance in hand of £6 18s. 9d., the statement was adopted. The meeting then adjourned.—D. A. ROTHNIE, Secretary.

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Red Hills (St. Andrew).—A very interesting monthly meeting of this Branch was held last week. Present:—Mr. A. H. Rogers, presiding, Messrs. C. Lee and W. Bonfield, Vice-Presidents, Jno. Williams, W. Lewis, D. P. Phillips, J. Matthew, E. Reece, E. Jackson, S. Matthew, E. Rainford, Aug. Moore, Henry Parker and J. N. Wallen, Secretary. Mr. Briscoe, the Travelling Instructor who came from Castleton for the purpose of attending the meeting was also present. The minutes of last meeting were read and confirmed. The Rev. M. Lockett and Messrs. Briscoe and Reece paid in their subscriptions and were enrolled as members. Communications:—One from the Secretary of the Jamaica Agricultural Society, another from the Director of Agriculture *re* Farm School; another from the Buff Bay Branch asking our co-operation in their intended monster Show on the 1st August, next, and one from the Colonial Secretary *re* Red Hills tank were read and discussed. The Secretary next read the report of the Committee on the Jippi-jappa hat class, which was summarised as follows:—1. That a class can be formed. 2. That each pupil pays a fee of 1/ a week for tuition: two from same house 9d. each. 3. That a teacher be appointed, on the condition that the fees will be the amount given as payment. 4. That boys and girls can be taken. 5. That the Secretary make all arrangements and supervise the work. After a lengthy discussion in which the Instructor took a prominent part, the report was adopted, and instruction was given that the class be started at once. It was suggested by the Instructor that the matter of the tank be left over for a short time, after which a petition can be sent in to the Parish Board. Mr. Louis suggested a Pound for the district. This was over-ruled by the other members—every one present taking a part in the discussion. The President now asked Mr. Briscoe to address the meeting. After referring to many points

in which the members can improve their homes and cultivations, he wound up by stating that the lack of co-operation among our people has always been and will still be detrimental to our progress, and urged upon every member and visitor present the necessity for co-operation. Every member felt that that it was one of most interesting meetings that has ever been held here.—JAS. M. WALLEN, Secretary.

P.S.—The Instructor has offered a prize of 4/ for the best made hat in the class on his next visit, and the President has also offered 2/ for the second best. The Secretary was asked to send in the names of the gentlemen recommended by the Society to be authorised persons under the new Prædial Larceny Law. A vote of thanks was given to the Instructor and the meeting broke up at 7.30.

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Windsor Castle.—The first regular meeting of this Branch was held on Tuesday, May 3rd, at the Presbyterian meeting house at 5 p.m. There were present: Messrs. Crooks, the first Vice-president, in the chair, Cradwick, Burnett, P. C., and Joseph, Mitchell, Reid, Rogers, Kelly, Ellis, Young, Sinclair, Hamilton, Hyatt, Tucker, the Misses Burnett and about ten other members. The rules prepared by the managing committee were read and adopted and the corresponding Secretary was asked to have them printed. Mr. Cradwick gave some valuable hints on the working of the Society. It was unanimously agreed that a stoutly bound book be purchased for the keeping of the minutes of the meetings. Mr. Cradwick then addressed the meeting on the Goshen and Nashville Shows, pointing out the special features of the prize lists which commend them to settlers and encouraging members of the Society to send entries. Mr. C. H. Ellis next submitted a petition for a properly constructed cart-road between Gayle and Windsor Castle which was duly signed by all the members present, and a resolution was passed showing that such a road is an absolute necessity. Among the matters to be taken at next meeting is a discussion on "Cutlass cleaning vs. Hoe-cleaning," and the keeping of pigs and their value. The next meeting will be held on Tuesday, June 5th.

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Troja (St. Catherine).—This Branch met at its usual place on the evening of 28th April. There were only thirteen members present, but that did not prevent the interest which always prevails in the meetings. Mr. T. J. Cawley, the President, occupied the chair. The usual meeting which should have been held in March, was completely washed out by the rain, and so the minutes of the last meeting which was held in February, as well as those of a special one held during the early part of March, were read and confirmed. A letter from the Chairman of the Local District Committee of Nashville, soliciting the co-operation of this Society in the preparation of exhibits for their approaching Show, was read. A Committee was then formed consisting of Messrs. A. McNeil, A. Gardner, and the Secretary. The Secretary was instructed to secure prize lists of the Nashville Show as early as possible. Rules drafted by the Board of Management, and intended for the Society, were submitted, and after a few amendments, they were all passed. It was decided that the Secretary should take steps to have them printed. The Praedial Larceny Bill was brought up by the President, and a warm discussion followed. Steps are to be taken for the appointment of "authorised persons" at the next meeting, in the meanwhile the Secretary is to endeavour to obtain a copy of the Praedial Larceny Bill through the Secretary of the Jamaica Agricultural Society. The roll was called and the meeting adjourned.—A. VIVIAN HAGUES, Secretary.

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Avocat (Portland).—The regular monthly meeting of this Branch was held in the Schoolroom on the 7th May, at 4.10 p.m. There were present Rev. Fr. P. F. X. Mulry, s.j., William Cradwick, Esq., Agricultural In-

structor, the Secretary, and eleven other members. The chair was taken by Rev. Father Mulry, the President of the Society. After the minutes of the previous meeting were read and confirmed, an address was presented to Mr. Cradwick. He replied in suitable terms and dealt with the chief points mentioned, viz: roads and markets. He indicated to the members the advantages that would be derived in having their produce properly gathered and cured preparatory to exporting same to the London markets; oranges and other fruits should also be sized and nicely wrapped. All the members could combine when they are ready and send twelve or more tons of cocoa and coffee to the markets in London, where they will obtain fairly good prices. He also gave the necessary information about the roads, having advised that petitions should be sent to the Government authorities. Speaking on the raising of cattle, he suggested that each member should possibly do his best to keep same and to insist on getting the best breed. He referred to the Buff Bay Show, which will be held on the 1st of August, 1910, at Woodstock, and each member promised to co-operate in making the Show a complete success by sending exhibits. Various items on the prize list were also explained. After correspondence and other relevant matters were gone through, the President informed the members of the loss which the British Empire has sustained in the death of His Majesty the King; a resolution of regret was moved by the Secretary, seconded by Mr. Joseph Smith and adopted, after which the meeting adjourned till the 11th prox.—J. N. PERKINS, Secretary.

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St. John (St. Catherine).—A regular meeting of this Branch was held at Kitson Town on Monday, 16th May, at seven p.m. The attendance was fair. Mr. F. A. Vernal, the President, occupied the chair. The minutes of the last meeting were read and confirmed. The Annual Report of the Society for the Protection of Animals (a copy having been forwarded by Mrs. Bourne) was read. The Secretary was advised to make, or at least to forward, suggestions to the hon. Secretary of the S.P.A.J., as well as the following:—"That this Branch begs to convey its sincere thanks to the S.P.A.J. for its report and prays that the time may not be long when cruelty to animals will be a thing of the past." Immediately after the meeting was called to order, this resolution relative to the death of His Majesty King Edward the Seventh, was, on the motion of the President, seconded by the Secretary, unanimously adopted:—Resolved—"That the members of the St. John's Branch of the Jamaica Agricultural Society, learn with profound regret of the demise of our beloved Sovereign and beg to place on record their deep and heartfelt sorrow over this national loss sustained by the death of our King. That this Society begs respectfully to tender its respectful sympathy to the Royal Family in their irreparable loss. That a copy of this resolution be forwarded to the authorities." On the motion of Mr. Vernal, the meeting adjourned for five minutes as a mark of respect to the late King. Books from the German Kali Works were received. The Secretary was instructed to acknowledge the receipt of same as well as the thanks of members. The praedial larceny evil was again discussed. The members were of opinion that the 'authorised persons' should be protected; for as a rule thieves are generally the most desperate people in our Island and those that have to take them in charge should be protected from personal injury. After the discussion the following resolution was adopted:—"Knowing that praedial thieves are generally boisterous and dangerous when caught, by means of which the person and life of those who are carrying them may be endangered—resolved that the Government be again respectfully approached in order that the same protection may be given these authorised persons as is being done to the district constables." Mr. Banton's motion relative to the Pound Laws, which arose out of a discussion from a letter published in the April JOURNAL, was deferred until the 20th June, in order that he

might get more information on the subject. The time is very dry and intensely hot. It is with difficulty that a little water can be got. As far as the dumb creatures are concerned, it does not matter where they are, *they* have to drink it when they can get it. It is not very easy for one who is unacquainted with local conditions, to realize the gravity of the situation. Sugar is very cheap, ground provisions are scarce.—S. A. BANTON, Secretary.

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Comfort Hall (St. Elizabeth).—On Monday, 18th April, a meeting of this Branch Society was held with the President, Vice-president, Treasurer, Secretary and other members in attendance, though it was not as large as former meetings owing to the push of field work and other calls for some of our members to other parts just at this time of the year, still the enthusiasm and deep interest hitherto manifested at our meetings, is still alive and growing amongst our members. Special meetings on "Agricultural Loan Bank" had been held during the months of November and December last, and the scheme is still under consideration awaiting the next visit of our Instructor, Mr. J. T. Palache. The minutes of the previous meetings were read and confirmed as usual, followed by letter from the General Secretary on the Revised Law on Praedial Larceny as published in the JOURNNL for October last, when three persons were nominated for this and the surrounding districts as "authorised persons," and in due course their names to be sent to the Inspector General of Police for confirmation. Then came the letter from Mr. Chas. Josephs, M.P.B., promising an early visit in response to our repeated cry of the road leading into the Mahogany Grove and Breeze Hole districts, to have a personal experience for himself, and giving a donation to our "Empire Day Fund," as well as one of 2/6 from the Resident Magistrate, Mr. J. R. Reece, towards the fuud. The Secretary was directed to write to Mr. J. T. Palache a letter of sympathy on his late illness, and hopes that he will soon be able to go his usual round of work; also to Mr. Josephs, acknowledging his letter with thanks and to fix his date of coming. Messrs. Laler, Hibbert and the Secretary then made encouraging remarks towards the upkeep and growth of the Society and the good therein, and that will be forthcoming by unity and perseverance, when Messrs. Henry White and Jas. Frith became members. By request the Secretary was directed to apply to the General Secretary for any such grains that might be at his disposal for distribution suitable for planting at this season of the year, also to write to the Instructor to fix date for meeting during next month, when the meeting came to an end followed by a very helpful shower after many weeks of dry weather, gladdening the hearts of all and sending them home satisfied that they had spent a profitable day.—D. S. WILLIAMS, Secretary.

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St. Faith's (St. Catherine).— The annual meeting of this Branch was held in the Grateful Hill Schoolroom on Thursday, the 28th April, 1910. There were present: A. Carey, Esq., President; Rev. T. Sherlock, Vice-president; Mr. Briscoe, Agricultural Instructor; the Secretary, and several other members. The minutes of the last meeting were read and confirmed. It was moved by Rev. T. M. Sherlock, seconded by Mr. Briscoe and agreed, that the Treasurer's account, presented to the last meeting of the Show Committee, be adopted. The Treasurer presented a final account showing an actual balance in hand of £19 6s. 2d. The boards saved when sold will realize £7. One small item of debt on printing when discharged, would leave fully £25 to the credit of the Branch. Rev. T. M. Sherlock moved, seconded by Mr. Briscoe, that the account be accepted. This was done. Items of correspondence were read from the Secretary of the Parent Society *re* railway freight charges; the meeting decided in favour of a reduction of the freight charges on agricultural products. A letter was read from Mr. W. F. Vassal resigning his

office as assistant to the Secretary and Treasurer. The Secretary spoke on the merits of Mr. Vassal's work, and after some discussion, it was moved by Rev. T. M. Sherlock, seconded by the President and unanimously agreed to, that a letter of acknowledgement be sent to Mr. Vassal and that he be asked to reconsider his resignation. Mr. Sherlock moved, seconded by Mr. Briscoe, that any amount above £20, now in the possession of the Society, be appropriated for the purchase of seeds such as vegetable seeds, seed potatoes, and seed corn, for the use of the Society from time to time. This resolution was carried by a majority of votes. On the suggestion of Mr. Sherlock, it was decided that a voluntary deputation from the Society visit the surrounding districts with the view to have interest aroused in agricultural matters. The first meeting was fixed for Sandy Hill on the 11th prox. The position of "authorised persons" under the Praedial Larceny Law, came up for discussion. One such person who recently made an arrest, which resulted in a conviction of the offender, complained that after having to lose a day going to the Riversdale Constabulary Station, and another to attend the Courts at Linstead, each place being many miles off, he received a payment of only 5/. The meeting was of opinion that there should be a scale of payment, the same as that which governs the payment made to district constables. The Secretary was instructed to call the attention of the Parent Society to the fact that the law does not provide for the protection of these "authorised persons" in the execution of their duty; also that the Sergeant-major be instructed to visit the district and instruct these "authorised persons" as is being done in the Parish of St. Mary. The following addition was made to the membership of the Branch: Messrs. Z. Thomas, F. Rennalls, T. Kemp, and Jas. Rennalls. The election of officers resulted in the following appointments:—President, A. Carey, Esq., re-elected; Vice-Presidents, Rev. T. M. Sherlock, re-elected; Mr. W. L. Rainford, re-elected; Secretary, Mr. A. P. Hanson, re-elected; Assistant Secretaries, Mr. W. F. Vassal, re-elected; Mr. T. A. Thomas; Treasurer, Mr. A. P. Hanson, re-elected. It was moved by Rev. T. M. Sherlock, seconded by the Secretary and agreed to, that district Treasurers be appointed to assist in collecting the annual subscriptions. The following were appointed to act in that capacity: Messrs. R. S. Anglin, Z. Randall, and W. L. Rainford. On the suggestion of the Secretary and Treasurer, it was agreed that the amount to be lodged be deposited in the Bank of Nova Scotia, and that it be lodged in the names of the President, Vice-president and Treasurer, two signatures to be necessary for withdrawal. The Rev. Sherlock spoke of the work of the officers and others who worked arduously to insure the success of the recent Show, in glowing terms. The Secretary was instructed to write thanking the following ladies and gentlemen who judged the exhibits:—Mr. and Mrs. J. H. McPhail, Mr. and Mrs. G. D. Purdy, Mrs. Sherlock, Mr. Jacobson, Mr. Payne, and Mr. Mossman. The Society takes advantage of this opportunity of again thanking the ladies and gentlemen who liberally contributed to the Show Fund, and but for whom the venture would not have been the success it was.—A. P. HANSON, Secretary.

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Grand Cayman.—The third annual meeting of this Society was held in the Victoria Hall, Georgetown, on Tuesday morning, April 5th, 1910, at ten a.m. There were present: His Honour G. S. S. Hirst (Chairman), E. Parsons, Esq., J.P., A. E. Panton, Esq., J.P., J. S. Webster, Esq., J.P., Wm. Farrington, Esq., J.P., Capt. Alex. Crighton, J.P., Rev. R. C. Young, Messrs. Arthur Bodden, Law Bennett, O. Green, J. M. Jackson, E. Welds, M. McTaggart, D. McTaggart, J. R. Watler, Darling Watler, (Outdoor Secretary) J. Miller, K. Henderson, H. Bodden, Rupert Bodden, Joseph Nixon, Inspector E. P. Watler, P. C. McCoy, Mrs. G. S. S. Hirst, Honorary Secretary and Treasurer; Mrs. Ellen Bodden, Mrs. O. Green, Mrs. Wilmot Bodden, Mrs. Arthur Bodden, Mrs. J. R. Watler, Misses

Clara Eden, Rosamund and Lulu Ebanks, M. Miller, Nanette and Estelle Linwood, S. A. Saunders, L. LeFranc, Madeline Roberts, Gladys Ebanks, Julia Clark, D. Hislop, Watler, C. Solomon, and Matilda Ebanks. The minutes of the last meeting wore read and confirmed: Mr. E. Parsons proposed their acceptance, Mr. Darling Watler seconded and they were accepted unanimously. The Chairman in his opening address made the following remarks: "Local industries were still neglected, though it was gratifying to observe how some mombers of the Society were now making better use of what they had at home. The Island can supply all the butter, lard, and corned beef it needs, yet in the past it has been the custom to forget about all these things being made locally and import them from abroad. In the case of butter there has been a pronounced improvement within the last year and there appears a prospect of this improvement continuing. I hope the day will soon come when butter, lard and corned beef will disappear from the Import List and be replaced by such luxuries as we now hardly know about. We could raise more pigs and goats than we do and thus keep our market supplied with fresh meat, which is most certainly more wholesome than imported preserved meats. At one time I am informed, schallots were exported from the Island to the Central American Republics where good prices were realised; last year schallots were almost as rare as turtles but this year a distinct improvement is noticeable. It is disappointing to note what little progress has been made in the cultivation of sisal during the year. I hoped that at this meeting I should be able to announce much larger cultivations than hitherto, but the spirit of expectancy which has kept Cayman back so many years, has reasserted itself and I suppose, we must wait till it is overcome. Members should be more active and alert; the Annual Show held in December last, though a great advance on its predecessors, was still a long way short of what it should have been. Instead of a little over 200 exhibits there should have been 2,000. It is to be hoped that the next Show will be more successful. It would be well, if at each of our quarterly meetings, we offered a few shillings for some special product. In this way members would learn how to exhibit, an art which is at present not understood. Among members the wholesale destruction of land by burning is gradually dying out, but among others it continues as before. Mombers must try to show their less enlightened brethren the evil effect of this." The following statistics taken from the Tax Rolls will of no doubt, be of interest to members:—

	Cattle	Mules	Horses	Asses
Georgetown	315	-	59	5
West Bay	229	-	17	7
Prospect	272	6	58	10
Boddentown	511	8	105	10
East End	292	3	54	15

Making a total of 1,619 cattle, 17 mules, 293 horses, 47 asses. A statement of accounts for last year was taken as read, copies of which were sent to each member of the Society, showing a balance of £9 16s. 2¾d. in the bank, and 4/- in cash and stamps in Treasurer's hands. After a few remarks by the Rev. R. C. Young, he proposed that the balance sheet be passed; this was seconded by Mr. Darling Watler, and on being put to the vote was carried unanimously. The election of officers for the coming year then took place. The Chairman retired, Mr. Edmund Parsons, J.P., taking the chair. Mr. Parsons said he did not see any reason why the Chairman and other officers for the past year should not be re-elected, as they had done nothing to merit dismissal and he was quite sure they could not be improved upon. He proposed that His Honour the Commissioner be re-elected Chairman; Mr. Malcolm McTaggart seconded, and the Commissioner was re-elected unanimously. In proposing the re-election of the Hon. Secretary and Treasurer, Mr. Parsons referred in a very kindly manner to her services in the past. This proposition was seconded by Mr. James S. Webster, J.P., and carried unanimously. The Commis-

sioner proposed that Mr. Darling Watler be re-elected Outdoor Secretary. This was seconded by Mr. A. E. Panton, J.P., and carried unanimously. Mr. Parsons proposed that the three gentlemen who formed the Outdoor Committee be re-elected. Mr. Wm. Farrington. J.P., seconded and Capt. Alex. Crighton, Mr. Darling Watler, and Mr. Thos. J. Watler, were re-elected unanimously. Mr. Parsons proposed that the same Chairman for each district be re-elected. The Secretary remarked that some had been very energetic in getting new members and had worked for the good of the Society, but others had been more or less lazy and had done very little. The Chairman said he would still propose their re-election, not for what they had done but for what they were going to do. The Commissioner seconded and, Capt. Crighton for Spotts, and district, Mr. Elmslie Watler for Boddentown, Mr. Geo. Ed. Wood for East End, and Mr. Wm. Farrington for West Bay. were re-elected unanimously. The Commissioner resumed his seat as Chairman for the coming year and thanked the company for the kind remarks made concerning Mrs. Hirst and himself. A letter was read from the Hon. the Director of Agriculture *re* the Agricultural Scholarship, and as there were now no vacancies in the Hope Farm School, it was generally agreed that further consideration of this subject remain over to a more opportune time. The Rev. R. C. Young, Chairman of the Sub-committee, handed in his report. The matter of the Praedial Larceny Bill was not dealt with as the Chairman said it was presumably not applicable to the Cayman Islands. Motions by members.—The Rev. R. C. Young said, that while recently in Jamaica, he had had an opportunity of attending lectures on malarial fever and its cause—the mosquito. He thought that if the Society could make arrangements for similar lectures to be given in Grand Cayman it would be beneficial. The Chairman said that he had known a great deal of malarial fever in West Africa and he was perfectly confident that it did not exist in Grand Cayman; the giving, therefore, of such lectures would be practically introducing another "duppy." Mr. Parsons remarked that he was pleased to hear what the Chairman had said, because he had always been of the opinion that malaria did not exist on the Island, he was, however, in favour of the draining of swamps or anything else that would be likely to abolish the mosquito. The Chairman proposed that a memorial be sent to the Justices and Vestry drawing their attention to this matter and asking them to devote a sum of money to the drainage of swamps. Mr. Parsons seconded the proposition and stated that in his opinion it would only be necessary to drain two swamps in the western end of the Island, one between Georgetown and West Bay, and two at South Sound. This was carried unanimously and the Secretary asked to forward the memorial. The following were unanimously elected members of the Society:—Mrs. Ellen Bodden, Mrs. Green, Mrs. Arthur Bodden, Misses Nell Feurtado, Madeline Roberts, Gladys Ebanks, Messrs. J. E. Gale, O. Green, D. McTaggart, R. C. Stanhope, and Rupert Bodden. Apologies were received for the absence of Rev. W. Pouchie, Messrs. Elmslie Watler and Geo. Ed. Wood. Rev. R. C. Young showed samples of ginger which he had brought from Jamaica and asked Mr. E. Welds of West Bay to describe the cultivation and preparation of same for market. Mr. Welds explicitly described the methods adopted in Jamaica, but remarked that he did not think ginger would be a profitable product of this Island, the soil being, in his opinion unsuitable. The members were deeply interested in his remarks and he was thanked for his lucid description. There being no further business the meeting closed.—GERTRUDE HIRST, Honorary Secretary.

N.B.—At the request of the Hon. Secretary, a few members brought exhibits to the meeting, among which were a good sample of Sea Island cotton, sundry plates of eggs, collections of vegetables, cucumbers and

Darliston (Westmoreland).—The third annual meeting of this Branch was held on Friday, 27th May, at the Enfield Schoolroom, at 9 a.m. Present: J. W. Mennell, Esq., President; Captain Coward, Vice-president; Messrs. W. Smalling, W. H. G. Cooke, C. Brissett, A. Levy, C. J. Stewart, R. W. Smith, Treasurer. J. A. Crooks, S. J. Phillips, and the Secretary. The minutes of the last meeting were read and confirmed; after which the following resolution was moved by Mr. W. H. J. Cooke, seconded by Mr. C. J. Stewart and carried:—"That this Branch of the Jamaica Agricultural Society at its first meeting after the death of its beloved King, Edward VII., begs to offer its condolence to Her Gracious Majesty Queen Alexandra, to King George V., and all the Royal Family. and whilst feeling great grief at the loss the Empire has suffered in the death of the King, it begs to offer its loyalty to King George V., praying that the great King of Kings may support him in the onerous duties before him." The Secretary was directed to forward this resolution to the Hon. Colonial Secretary. The Secretary read two letters from the General Secretary on business, and a post card and a copy of the last annual report of the S.P.A.J., sent by the hon. Secretary of that Society to this Branch. The Secretary was instructed to reply to the hon. Secretary of the S.P.A.J. The following is a copy of the letter sent:—"I am directed by this Branch to acknowledge the receipt of post card accompanying the report of the S.P.A.J., and to thank you for them. The report was laid before the meeting as you desired and the members expressed their appreciation of the efforts of the Society and promised their co-operation in their immediate neighbourhoods." Report of yearly meeting:—During the year 1909-10, we had seven meetings, five regular and two special. All the meetings were fairly well attended. The General Secretary attended one of these meetings (29.10.09), and addressed the members and others who were present. Membership for the year ended 30th April, 1910, is fifty. Subscription for year ended 30th April, 1910, is 50/. Affiliation fee, stationery and correspondence for the same period is 13/7½. This Branch held its maiden Show on the 1st of January, 1910. Owing to small attendance it was not a success financially, but agriculturally it was a grand success. At the last meeting of this Branch held on the 15th April last, the Treasurer, Mr. R. W. Smith, was authorised to draw £2 from the reserve funds of the Society in order to close up all Show accounts. Balance now in hand for year ended 1909-10, is £3 0s. 0½d. This meeting should have been held on Friday last the 20th May, but owing to the funeral of His late Majesty the King, it was postponed until to-day. Election of new members.—Moved by Mr. C. J. Stewart, seconded by Mr. W. H. J. Cooke and carried:—That the following gentlemen be accepted as members of the Branch, namely, Messrs. Z. J. Atkinson, G. H. Heale, and C. Brissett. Election of officers.—The members present elected the following gentlemen to serve during the year 1910-11:—J. W. Mennell, Esq., President; Captain Coward, C. J. Stewart and H. D. D. Mennell, Esqrs., Vice-presidents; R. W. Smith, Esq., Treasurer; and J. H. Hedley, Secretary. Moved by the Chairman, seconded by Mr. W. H. J. Cooke and carried: "That if a Show in connection with this Branch should be held again, the Chairman, one of the Vice-presidents, the Treasurer and Secretary shall be put on the Show Committee." Meeting adjourned to Friday, 19th August, at 9 a.m., at the usual place.—J. H. Hedley, Secretary.

P.S.—Perhaps it may be of interest to some of your readers to know that I have been successful in getting English cabbage to seed at the Enfield School Garden this year. I have been trying at this for fully eight years now. Owing to bad weather here for vegetables this year, I have not reaped as good a crop as I usually reaped. My highest weight for